



## Perioperative pain-management of patients undergoing amputation

*What is the recent evidence in clinical practice?*

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## Welcome to ICPAN 2017

The Australian College of PeriAnaesthesia Nurses (ACPAN) in conjunction with the International Collaboration of PeriAnaesthesia Nurses, Inc. (ICPAN) warmly welcomes you to Sydney! We are delighted you have chosen to join us at this very special 4<sup>th</sup> biennial ICPAN Conference. ACPAN and ICPAN have worked together to design an experience that promises you a broad range of session themes spanning perianaesthesia nursing care. This exciting event compliments ACPAN's impressive transition to a College in July 2016.

The conference "Tides of Change – Advocacy, Education, Research" encompasses foundational aspects required to evolve safe, patient first, evidence-based health care practices across an increasingly interconnected and diverse global society. We are thrilled to welcome colleagues from the International Federation of Nurse Anesthetists (IFNA), Lifebox Foundation, and the World Federation of Societies of Anaesthesiologists (WFSA). ICPAN shares in their goal to make surgical care safer for millions of people residing in places lacking health professions education and care delivery infrastructure. The Exhibition showcases new products and services designed to enhance clinical practice, so please visit each stand to learn more during the various breaks offered. Do take a moment to visit the Silent Auction and perhaps bid on some interesting items donated by ICPAN supporters.

ICPAN 2017 provides specialized workshops, local hospital visits, a delegate networking forum, and numerous sessions aimed to broaden professional knowledge and skills. Contemporary anaesthesia practice and nursing initiatives are presented by expert practitioners enthusiastic to share poster presentations, research, quality improvement, innovative clinical practice, and important nursing advocacy skills. When providing an abundant menu of topics, concurrent session choices must be made. However, whatever you choose to attend, the content will surely benefit professional practice and begin or broaden international collegial connections. While regionally and culturally diverse, we live in a connected world having similar practice challenges that require more evidence to achieve best practice solutions.

In addition to fun social events, ICPAN 2017 offers a unique opportunity to closely network with national and international perianaesthesia colleagues. In this space, we share experiences that forge lifelong professional and personal relationships. Looking to the horizon, we foresee new opportunities to collaborate and broaden the science underpinning our professional work. There is so much to be achieved together for the ultimate benefit of patients and families for whom we provide care each day, across the world, and particularly for those embedded in resource poor areas.

Please take part in the opportunities that a global conference offers and afford some time to enjoy Luna Park attractions and beautiful, vibrant Sydney. On behalf of ACPAN and ICPAN, we give thanks for your tireless commitment to our chosen profession and the support for optimal global patient care. Have a wonderful visit to Australia and enjoy the conference! We're glad you're here.



**Joni M. Brady, DNP, RN-BC, CAPA**  
*ICPAN Chair*



**Fiona Newman, RN, BN, Cert Anaes Nursing,  
Cert IV TAA, FACPAN**  
*ACPAN President*



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*Available evidence suggests there is little difference in the incidence of post-operative sore throat between 1<sup>st</sup> and 2<sup>nd</sup> generation supraglottic airway devices - with one exception*

Ref: B-Baghaei K, Bailey CR, Wiles MD. Postoperative sore throat: a supraglottic review. Anaesthesia. 2016;71(6):705-17

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# General Information

## REGISTRATION DESK

The Registration desk, located in the Crystal Palace foyer, will be open during the following times:

Wednesday 1st November: 12.00pm – 7.00pm  
Thursday 2<sup>nd</sup> November: 7.30am – 5.00pm  
Friday 3<sup>rd</sup> November: 8.00am – 5.00pm  
Saturday 4<sup>th</sup> November: 8.00am – 12.00pm

## WELCOME RECEPTION

This two hour event will take place in the Trade Exhibition area in the Crystal Ballroom, Crystal Palace, Luna Park Sydney, from 5pm to 7pm on Wednesday 1<sup>st</sup> November. This will provide a great opportunity to catch up with friends and colleagues and enjoy drinks and canapés.

*Included for all full registration delegates.*

## NAME BADGES

Please wear your name badge at all times during attendance at the Conference. You will also need your name badge to access the social functions.

## CATERING

Morning teas, lunches and afternoon teas will be served in the Trade Exhibition area, located in the Crystal Ballroom at Luna Park. Special dietary requests: All effort has been made to accommodate delegates who indicated special dietary requests when registering. There will be a separate catering table for special dietary requirements. Please ask venue catering staff for assistance.

## MEETING ROOMS FOR SESSIONS

All Sessions will be held in the following rooms:

Plenary Sessions	- Big Top Auditorium
Concurrent Session 'A'	- Big Top Auditorium
Concurrent Session 'B'	- Big Top Foyer 2 (access via stairs to the left of the Big Top Foyer)
Concurrent Session 'C'	- Ted Hopkins Room (upstairs on the right hand side of Crystal Palace)

## CONCURRENT SESSIONS

Delegates are free to attend the Concurrent Session of their choice. Presentations are scheduled to start/finish at times given in the program.

## TRADE EXHIBITION

Trade exhibition booths are set up in the Crystal Ballroom, Crystal Palace. Please take the time to visit the sponsors and exhibitors, and acknowledge their support of the conference.

## POSTER DISPLAYS

The poster displays are located in the same area as the trade exhibitions and catering. Please visit the poster displays, as a lot of time and effort goes into producing them. Poster presenters are asked to stand by their poster during the lunch breaks, to answer any questions delegates may have.

## **SILENT AUCTION**

The Silent Auction will be held in the Green Room, on the Mezzanine foyer above the trade exhibition and catering area, in Crystal Palace. The Green Room will be open during the morning tea, lunch and afternoon tea breaks. All bids must be made by the end of the afternoon tea break on Friday. Winning items must be collected by the end of the morning tea break on Saturday. Cash payments are preferred.

## **CONFERENCE DINNER**

The Conference Dinner will take place on Sydney Showboats Harbour cruise, departing from King Street Wharf at 7.00pm. Please arrive at the wharf by 6.30pm. The Conference Dinner is an optional extra, and is not included in the registration fees. If you have purchased a ticket for the dinner, it will be located in your name badge pocket. Transfers to and from Luna Park or hotels have not been arranged – please make your own way to the wharf. Further information is listed below.

### ***Address***

King Street Wharf 5  
32 The Promenade

### ***Car Parking***

There are 3 parking stations within close proximity to the wharf:

- Shelley Street carpark, under the Macquarie Bank building
- Wilsons Parking, at the corner of Sussex and Erskine Street
- Wilsons Parking, 321 Kent Street

Parking rates are available directly from the carpark operator. We do not have any special parking rates. There is often heavy traffic between 5:30pm-7:30pm in the city on Friday and Saturdays, hence please allow sufficient time to facilitate parking and arrive at the wharf a minimum of 30 minutes prior to departure.

### ***Taxi***

Request the taxi driver to take you to Lime Street on King Street Wharf. Alight close to the Malaya or Kobe Jones Restaurant and walk down to the Promenade. The Australian Cruise Group office is opposite Wharf 5.

### ***Walking***

King Street Wharf is located on the Western waterfront of the CBD. You can access King Street Wharf from either Erskine Street, King Street or from the waterfront promenade beside Sydney Wildlife Park.

### ***Train***

The closest station is Wynyard which is approximately 7 minutes walk away. Walk down Erskine Street to King Street Wharf. An alternative station is Town Hall which is approximately 15 minutes walk away.

### ***Ferry***

Government and private ferries operate to King Street Wharf 3. Refer to ferry websites for details.

## **CONFERENCE EVALUATION AND CERTIFICATES OF ATTENDANCE**

An online evaluation form will be emailed to all participants after the conference. Please take the time to complete the evaluation, as your feedback is invaluable in planning future events. A Certificate of Attendance will be emailed to you once your evaluation form has been submitted.



## MOBILE PHONES

Please turn off or silence your mobile phones during the presentations as a courtesy to the speakers and other delegates.

## SECURITY

The venue management or conference organisers accept no responsibility for loss of any items left in the function/meeting rooms, other venue areas or car park.

## TAXI

Taxis Combined Service 131 008  
Premier Cabs 131 017  
GM Cabs 131 001

## PARKING

Luna Park has onsite car parking facilities and is open from 7am until 3am. Entry is via Paul Street (off Alfred Street South, Milsons Point) and the cost for 4-24 hours is \$39.

## CONFERENCE ABSTRACTS

All submitted abstracts are included in this booklet. For further information on any particular paper or presentation, please contact the author/presenter directly.

## WIFI

Free Wifi is available within Luna Park. Please check at the registration desk for details.

## DELEGATE FORUM: THE GATHERING OF NATIONS - *IMPORTANT INFORMATION* Friday 3 November : 10.30am -1.00pm

The Delegate Forum will have assigned seating to promote perianaesthesia practice conversations and direct networking with global colleagues.

### To prepare for this session:

- Please note your assigned table number in advance. Seating assignments will be located on posters found in the Big Top Foyer and at the Registration Desk on Thursday and again on Friday morning.
- Please be on time, seated at your assigned table number before the Forum begins.
- Each table will have an assigned group leader to guide the discussion. You may participate and contribute to the session without Internet access.
- Please see staff at the conference registration desk if you require more information or assistance about the Forum.

## Contact

### Conference Managers

*Please direct any enquiries to the Conference Managers:*

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## Refreshment Breaks





## Trade Exhibition

Booth 1	MDevices
Booth 2	Aspen Pharmacare Australia Pty Ltd
Booth 3	Fisher & Paykel Healthcare
Booth 4	Intersurgical Australia Pty Ltd
Booth 5	Fresenius Kabi Australia
Booth 6	University of Tasmania
Booth 7	Vyaire Medical
Booth 8	Teleflex Medical Australia

## Keynote and Plenary Sessions Speakers (program order)



### **Dr Paula Foran, PhD, RN, FACPAN, FACORN**

*Australian College of Perianaesthesia Nurses – Chief Examiner*

*Australian College of Perioperative Nurses - Education Officer*

*Critical Care Education Service – Senior Lecturer*

*University of Tasmania – Unit Co-ordinator Perianaesthesia CNA532 & CNA534*

Dr Paula Foran RN, has an Anaesthesia & Post Anaesthesia Nursing certificate, Graduate Diploma in Adult Education and Training; Certificate 4 in Workplace Assessment and Training; Master of Education (research) and is a Doctor of Philosophy (Workplace Education and Training). She has held positions of Associate Charge Nurse, Charge Nurse, Clinical Nurse Educator and Clinical Facilitator for Perioperative Education. Paula has a number of publications to her credit (AORN August 2015, Nurse Education in Practice 2016), has recently completed two book chapters on Post-Anaesthesia Care & has been a guest speaker at National & International Conferences.

Paula is a Fellow of the Australian College of Perianaesthesia Nurses (ACPAN) and is their Chief Examiner. She is also a Fellow for the Australian College of Operating Room Nurses (ACORN) and is their national Education Officer. She also holds a senior lecturing position with Critical Care Education Service, Unit co-ordinator for University of Tasmania, a casual appointment with the Deakin University Medical School and sits on the Victorian Consultative Council for Anaesthetic Morbidity and Mortality. Just to keep her hand in clinically, Paula works 2 days per week as a grade 2 registered nurse in perianaesthesia nursing.

### **Tides of Change: An Exciting Future for Perianaesthesia Nursing, Let's make it happen!**

Perianaesthesia nursing is a wonderful and privileged profession. Patients entrust themselves into our care when they are at their most vulnerable and dependant. Caring for these patients during anaesthesia and post-anaesthesia requires a specific skill set encompassing compassion, planning, knowledge, and critical thinking. All perianaesthesia nurses possess these skills but often do not appreciate their level of expertise and scope of their ability and workplace talents.

The Australian population is aging which, in turn, will lead to an increased demand for surgical health services. So too the perioperative nurse matures making it essential for us to provide an environment of support and education to encourage replacement nurses for our retiring workforce and enough qualified perianaesthesia nurses to meet future projections.

This presentation will present the credentialing process for perianaesthesia nurses in Australia including anaesthetic nurses (as defined by PS08) and Post Anaesthetic Care Unit (PACU) nurses, as defined by ACPAN. It will also outline future initiatives by ACPAN to provide the education support at all levels of perianaesthesia education and training.

Discussion will also surround future challenges for perianaesthesia nurses including, the decreasing numbers of perioperative nurses with post-graduate qualification, replacing experienced perianaesthesia nurses in an aging workforce and caring for patients with greater comorbidities. This will require passion and commitment by our workforce which I know we all possess. As we watch our second group of Australian College of Perianaesthesia Nurses (ACPAN) Fellows graduate at the ICPAN conference, it is time to embrace our profession, appreciate our special skills and celebrate them together.



**Owen Ashwell**

Owen Ashwell is the lead specialist for the Perioperative Mortality Review Committee at the Health Quality & Safety Commission in New Zealand. Owen's previous experience in the perioperative care area has been as a charge nurse manager, clinical nurse educator and registered nurse at Wellington Hospital. He has been involved with national and international perioperative societies and has a masters in nursing.



**Harriet Zych**

Harriet Zych trained at Guy's and St Thomas' hospitals in London and has worked there since 2012, specialising in post anaesthetic care. In addition to teaching in Cameroon, she worked in Greece with Doctors of the World in response to the refugee crises in Europe. She also has a diploma in tropical nursing from the London School of Hygiene and Tropical Medicine. Harriet is a member of the British Anaesthetic and Recovery Nurses Association.

### **Experience Of Teaching A Recovery Room Course To Nurses In Cameroon, Africa**

An opportunity arose to teach nurses the principles of recovery room nursing for 6 weeks in Cameroon. This presentation will outline the differences encountered, experiences and reflections of the 6 week volunteer mission at the Mbongo Baptist Hospital, Cameroon.

Information on facilities and types of surgery and anaesthesia was gathered prior to leaving for Africa. This is innovative practice in the area of nurse education. Having facilities and a culture different from our own requires a flexible and respectful approach to successfully implement a recovery room nurse's course in Africa. This presentation reflects on that experience.

This presentation will open people's minds to a rare and unique opportunity to do volunteer work in Africa that we were lucky enough to be able to accept. Seeing how perianaesthesia nursing can be implemented in a challenging environment also gives context to our own healthcare settings.

**Dr Hans Donald de Boer**

Dr. de Boer (PhD anesthesiologist/pain specialist) is scientifically active in neuromuscular management (sugammadex), perioperative patient safety, innovations and legal issues in perioperative patient care and ERAS® Society committee member implementing opioid free/opioid sparing anesthesia techniques programs. In all these fields he is involved in educational and scientific programs.

**Brenda Zoer**

Brenda Zoer is a trained nurse anaesthetist and is now working at the department of perioperative care in the Martini General Hospital Groningen. Originally she has a master in science (Biology) and subspecialized in behavioral and neuroscience and internationally active as a clinical study manager at PRA International. After her training as a nurse anaesthetist she focused on postoperative cognitive dysfunction. Furthermore, she is a member of the ERAS committee in the ERAS Centre of Excellence in the Martini General Hospital Groningen. She is also a teacher at the Wenckebach Institute where she is participating in the education of nurse anaesthetist with special interest in evidence based medicine.

**Hanneke van Kooten**

Hanneke van Kooten is a trained general nurse and is now working on the PACU as a certified PACU nurse in the Martini General Hospital Groningen. She is involved in several quality committees and participating in innovative projects. She is EBP (Evidence Based Practice) and Good Clinical Practice (GCP) certified. Furthermore, she is a member of the ERAS committee in the ERAS Centre of Excellence in the Martini General Hospital Groningen. She is also specialized in nursing patients with chronic respiratory insufficiency/failure. Nationally and internationally she is involved in conference committees in her profession (Member of National Conference Committee (BRV) and Global Advisory Council, ICPAN), with special interest in evidence based medicine.

**Enhanced Recovery after Surgery (ERAS)**

ERAS is a multimodal, multidisciplinary approach to the care of surgical patients and based on evidence based protocols. These ERAS protocols are multimodal perioperative care pathways designed to achieve early recovery after surgical procedures by maintaining preoperative organ function and reducing the profound stress response following surgery. The key elements of ERAS protocols include preoperative counselling, optimization of nutrition, standardized analgesic and anesthetic regimens and early mobilization. Despite the significant body of evidence indicating that ERAS protocols lead to shorter length of hospital stay by 30-50%, a reduction of complications by 40% and improved outcomes, they challenge traditional surgical doctrine, and as a result their implementation has been slow. Moreover, after implementation of the ERAS program a reduction of healthcare costs is achieved and therefore ERAS is a good example of valued based healthcare. As initially implemented in colorectal surgery, ERAS has been shown to improve outcomes in almost all major surgical specialities. Many surgeons and anesthesiologists state that they have “never heard of ERAS,” while others cite inadequate multidisciplinary and community support as an impediment to implementation. In terms of barriers to introducing ERAS, even the simple measures are discussed and still represent fundamental changes in practice, and can therefore be difficult to achieve. One of the most important aspects is the ERAS team, which includes pre-admission staff, dieticians, nurses, physiotherapists, social workers, occupational therapists and doctors. All team members must be familiar with ERAS principles and be motivated to carry out the program; they must be able to overcome traditional concepts, teaching and attitudes towards perioperative care. The ERAS principles, the strategies how to implement a complete ERAS program in a hospital, the healthcare improvement and reduction of healthcare costs will be discussed.



**Professor André van Zundert, MD, PhD, FRCA, EDRA, FANZCA**

*Professor & Chairman, Discipline of Anesthesiology, The University of Queensland, Chair, The University of Queensland 'Burns, Trauma, Critical Care Research Centre', Chair, RBWH & The University of Queensland 'Centre of Excellence & Innovation in Anesthesia', Royal Brisbane & Women's Hospital, Department of Anesthesia & Perioperative Medicine, Brisbane, Qld, Australia*

Qualifications in anesthesia, intensive care and trauma care, graduating as a medical doctor cum laude, at the University of Leuven (Belgium) in 1978, and with a PhD in obstetric anesthesia from the University of Leyden (Netherlands) in 1985. Has worked for 30 years as an anesthesiologist in the Netherlands, and has obtained numerous diplomas and certifications in anesthesia-related courses, often at instructor level. Received 13 international awards. Founding member of European Societies of Anaesthesiology and Pain. Presents nationally and internationally on airway management and regional anesthesia, annually. Prior to relocation to Australia in 2013, Director of Anesthesia at the Catharina Hospital Brabant Medical School in Eindhoven – a major teaching institution in the Netherlands. Currently holds the position of Professor and Chairman, Discipline of Anesthesiology at the University of Queensland Medical School, and the Royal Brisbane and Women's Hospital. He has ongoing professorial appointments in anesthesiology at the Universities of Ghent (Belgium), Maastricht (Netherlands), Udayana (Indonesia), Queensland University of Technology and Victoria University Melbourne (Faculty of Engineering & Sciences).

**Videolaryngoscopy: A Master Piece for Total Airway Management**

General anaesthesia is administered daily in hospitals around the world, with more than 350 million surgical interventions being performed every year. After induction of general anaesthesia, the patient's airway need to be secured and protected from the risk of aspiration. Several techniques can be applied: a) bag mask ventilation; b) tracheal tube; c) supraglottic airway device; d) oropharyngeal or nasal airway; e) double lumen tube; f) temperature probe; and h) nasogastric tube.

Direct laryngoscopy with Macintosh blades has been used since the 1940s. Successful intubation is not always obtained. Videolaryngoscopy is now widely used as it has many advantages over classic direct laryngoscopy: a) a wider angle of view (60° vs 15°); b) better laryngeal view of the glottis; c) better intubation conditions; d) vision-guided insertion and optimal positioning of SADs and other adjuncts; e) clear distinction between the tracheal and oesophageal openings; f) can be used in elective, emergency cases, in all ages, in virtually all circumstances, whether they are considered easy standard intubations in normal patients or in patients with difficult airways; and g) improved teaching options, i.e. not only the intubator sees what happens during intubation, but also the supervisor and helper can see the problem and adjust if necessary.

Videolaryngoscopy certainly has improved airway management. Nevertheless, it is a technique that needs to be mastered. Before the device is used on patients, it is recommended that practice is gained on manikins. It is wise to study carefully the differences among the available videolaryngoscopes on the market as they may be significant (Macintosh or angulated versions; channelled and non-channelled version have all their indications). It is no longer: should we use direct laryngoscopy or indirect videolaryngoscopy? But which videolaryngoscope provides us the best answer in modern airway management.



## **The Gathering of the Nations**

### **Delegate forum: An “Old” ICPAN Tradition**



**Dr Ellen L Poole, PhD, RN, CPAN, CNE**

*Professor, Chamberlain College of Nursing, Phoenix, AZ, USA*

Ellen Poole has been a staff nurse, head nurse of PACU and ambulatory surgery, and clinical nurse III in PACU. She is currently a professor at Chamberlain College of Nursing teaching baccalaureate, masters and doctoral students, with a primary focus on nurse educators along with advanced research courses. Dually certified as perianesthesia nurse and a nurse educator, Dr. Poole has been actively engaged in both the Research and EBP committees of ASPAN serving as a mentor to many colleagues along the way. In addition to her published studies on family visitation in PACU and ambulatory surgery, she was the first to publish on working along in PACU. She has been co-investigator on several ASPAN studies such as the two Delphi studies and an evaluation of ASPAN's preoperative videos.

### **Review of Copenhagen Forum Results, Related Findings from the Literature**

Continuing the work started at the Copenhagen Conference, this interactive networking session provides a unique opportunity for delegates from different countries to meet in smaller groups to discuss various perianesthesia clinical practice and management issues as discovered at the Copenhagen Conference. Groups will be led by a facilitator to enable sharing of the findings with all delegates, fostering opportunities to meet and discuss possibilities for future collaboration specific to perianesthesia nursing interests (e.g. staff development, education, management, research and evidence-based practice).



**Bente Buch**

Bente Buch is the former conference Chair at ICPAN 2015, Copenhagen Denmark. She was part of the Delegates forum, an interactive session where 400 delegates from 21 countries discussed different perianesthesia topics. Bente has worked as clinical nurse for the past 26 years at University hospital Rigshospitalet, Copenhagen. For the last ten years, bente has also worked as an educator and mentor, whilst working part time in recovery and part time educating nurses. Bente is board member of the Danish

Association of Nurse anesthetist, Intensive care- and Recovery nurses. Here her main fokus is a national education for Recovery nurses in Denmark and of course ICPAN, where she is a member of Global Advisory Council (GAC).



**Mette Ring**

*Registered Nurse, Klinik Akut, Aalborg University Hospital, Denmark*

Mette Ring has worked as a Registered Nurse since 1980. After a few years of experience in clinical practice, Mette specialized as an intensive care nurse and a Nurse anesthetist. Mette currently works as a nurse anesthetist at Aalborg University Hospital in Denmark. Mette has a masters degree in Learning processes and for several years has been working with different education programs in clinical practice. Mette was part of the organizing group for the ICPAN Conference in 2015, which was held in Copenhagen Denmark.

### **Global Hot Topics: Interactive Table Discussions**



**Dr Joni M. Brady, DNP, RN-BC, CAPA**

Born to a Canadian mom, American dad, and family life that crossed national borders, Joni now serves as Chair for the International Collaboration of PeriAnaesthesia Nurses, Inc. (ICPAN [www.icpan.org](http://www.icpan.org)) Transitional Board of Directors. She earned a nursing diploma in New York (USA) and began professional life in the intensive care unit. An affinity for critically ill postoperative surgical patient care led to recovery room specialization, with a subsequent focus on perianaesthesia and perioperative pain management practice for most of her career. In 2015, she received a Doctor of Nursing Practice Degree in Nursing Administration from George Mason University in Fairfax, Virginia (USA). This published work

explored the role of formal education with mentorship in the promotion of clinical nurses' evidence-based practice adoption across a multi hospital health care system. Joni holds board certification in pain management and ambulatory perianaesthesia nursing. Being in a military service family, she moved about Asia, North America and Europe over three decades; ICPAN involvement began in Europe in 2009. Dr. Brady advocates for expansion of clinical nurse education and mentorship and interprofessional perioperative care team collaboration to improve knowledge and partnership that positively contributes to local and global surgical quality and patient safety.

**Building Collaboration to Improve Nursing Connections and Patient Safety**





**Jan Odom-Forren**

*Associate Professor, College of Nursing; University of Kentucky  
Lexington, KY, USA; Perianaesthesia Nursing Consultant, Louisville,  
KY, USA*

Jan Odom-Forren has been a staff nurse in PACU; clinical nurse specialist, perioperative services; nurse manager, PACU; and Director, Surgical Services. She is currently an associate professor at the University of Kentucky, College of Nursing and a perianesthesia nursing consultant. She is an international lecturer on perianesthesia and sedation issues and has published extensively in journals and books. Her research area of interest is postoperative symptom management with a focus on patients after ambulatory surgery. Dr. Odom-Forren is a past president of the American Society of PeriAnesthesia Nurses and has served that organization in many capacities. She is a Fellow in the American Academy of Nursing where she serves on the Acute and Critical Care Expert Panel. She is currently a Co-Editor of the *Journal of PeriAnesthesia Nursing* and editor of *Drain's Perianesthesia Nursing: A Critical Care Approach*.

**Keynote Address: Home Recovery of Ambulatory Surgery Patients: What Perianesthesia Nurses Need to Know**

Approximately 60-70% of surgeries today are conducted in the ambulatory surgery setting. However, it has only recently have we determined what patients and their caregivers experience at home after ambulatory surgery. Patients and caregivers have identified important gaps in care that need to be disseminated to nurses at the bedside. This session describes the home recovery of the ambulatory surgery patient and experiences of the caregiver based on new evidence. Gaps in care identified by patients and their caregivers will allow perianesthesia nurses to add vital information to their care of patients. It will also describe a pilot study conducted with ambulatory orthopaedic patients using an innovative approach to deliver information about self-management. After this session, you should be able to: (1) List symptoms and consequences of surgery that are experienced by patients and their caregivers during home recovery. (2) Identify self-management techniques used by patients at home after ambulatory surgery. (3) Discuss implications for the perianesthesia nurse in the education of patients and caregivers for home recovery. (4). Discuss feasibility of an innovative approach to assist with patient self-management of care.



**Dr Rob McDougall**

*Lifebox Volunteer; Deputy Director Anaesthesia and Pain Management, The Royal Children's Hospital, Melbourne*

Dr Rob McDougall MBBS, FANZCA, Grad. Cert Health Prof. Education is a specialist paediatric anaesthetist and Deputy Director of the Department of Paediatric Anaesthesia and Pain Management at the Royal Children's Hospital, Melbourne. He is a Clinical Associate Professor in the Department of Paediatrics, University of Melbourne. He has recently completed an 8 year term on the Council of the World Federation of Societies of Anaesthesiologists (WFSA). Rob has extensive experience in

education in anaesthesia and resuscitation in Asia and Australasia. His clinical interests include anaesthesia for burns, craniofacial and general paediatric surgery. Rob has Lifebox volunteer since 2011 and assisted with the development of the Lifebox educational materials. He is a leader on the Lifebox Australia and new Zealand project.

**Global Outreach to Promote Patient Safety: The Checklist Effect  
Lifebox: Australia and New Zealand**

This session will introduce Lifebox, the only NGO devoted to safer surgery and anesthesia in low resource countries. Lifebox was established in 2011 to provide pulse oximeters to the estimated 79,000 operating theatres globally that did not have access to this life-saving device. Since then Lifebox has evolved to become one of the leaders in promoting safer surgery and anaesthesia throughout the world. Since 2011, more than 15,000 Lifebox pulse oximeters have been distributed to over 3000 hospitals, and more than 5,000 health workers have been trained in how to use them effectively. The presentation will include a brief summary of the activities of Lifebox Australia and New Zealand as well as a screening of the short film "The Checklist Effect".

More information about Lifebox can be found at [www.lifebox.org](http://www.lifebox.org) and <https://www.interplast.org.au/learn-more/our-work/lifebox-australia-new-zealand/>



**Susan Fossum, BSN, RN, CPAN**

*President, ICPAN; University of California Medical Center, Davis, CA, USA*

Susan has been a staff nurse for over 43 years, practicing in PACU for 35 of those years. She has held positions of clinical nurse, assistant nurse manager, and clinical educator for OR and PACU. She currently travels worldwide with teams of plastic surgeons providing free reconstructive surgery for children, practices as an ACLS and CPR, and teaches CPR/First Aid in the community. Susan is a past president of the American Society of PeriAnesthesia Nurses and currently is the president of ICPAN. She has conducted and published clinical nursing research and has currently co-authored a chapter in *Global Reconstructive Surgery* titled *Perioperative Management: PACU Requirements and Set-up*.

**Nursing Advocacy / Global Implications**

The diversity of the nursing profession and its unique relationship with the public can provide opportunities for influence and change. Challenging times in healthcare create opportunities for nurses to have a greater voice for healthcare changes and patient safety.

Every nurse has the opportunity to make a positive impact on the nursing profession whether in their workplace, their community or for the nursing profession itself. Every nurse can learn and use specific skills that will allow them to advocate for safe, healthy work environments and for the patients they care for.

Nurses historically struggle to influence change on an individual basis within care delivery systems, or on the broader healthcare policy level where legislative decisions negatively impact the profession. Nursing knowledge, influence, and health and public policy contributions frequently go unrecognized. In reality, the collective “Voice of Nursing” is much too often silent, and in need of a unified approach by nurses to inform issues affecting patient care and nursing practice.

ICPAN provides nurses a unique opportunity to meet and explore shared practices. Using our collective global nursing voice we can provide a forum for nurses and nursing organizations to influence standards of care and clinical guidelines, and promote implementation of health policies and actions aimed at improving global patient care.

This session will discuss professional nursing advocacy and related implications for delegates. Essential advocacy skills will be presented. Through global connections and shared experiences, perianaesthesia nurses can advocate for our practice, improve patient care delivery and advance the profession.

# PROGRAM

Wednesday 1<sup>st</sup> November

12.00pm	<b>Registration Desk Opens</b> <i>Crystal Ballroom foyer, Crystal Palace, Luna Park</i>
	<b>Optional Workshops</b>
1.00pm - 3.00pm	<b>A. Writing for Publication</b> <i>Dr Jan Odom-Forren</i> <i>Dr Joni Brady</i> <b>Location:</b> Big Top Foyer Level 2, Luna Park
1.00pm -	<b>B. Novice Presenters</b> <i>Dr Denise O'Brien</i> <i>Dr Paula Foran</i> <b>Location:</b> Big Top, Luna Park
2.00pm - 4.30pm	<b>C. Master Class: The Second Victim</b> <i>Professor Stephen Gatt</i> <i>Professor André van Zundert</i> <b>Location:</b> Ted Hopkins Room, Luna Park
1.00pm	<b>Hospital Tours</b> ( <i>Meeting point – Luna Park Face, at entrance to park, no later than 12.45pm</i> ) <b>A. Chris O'Brien Lifehouse</b> <b>B. Prince of Wales Public Hospital</b>
5.00pm - 7.00pm	<b>Welcome Reception</b> Trade Exhibition Area, Crystal Ballroom, Crystal Palace, Luna Park

## PROGRAM - Day 1

Thursday 2<sup>nd</sup> November 2017

7.30am Registration Desk Opens  
*Crystal Ballroom Foyer, Crystal Palace*

**Session 1: Plenary Big Top Auditorium**  
**Chair: Fiona Newman**

8.30am Opening Ceremony  
Welcome to Country  
Inauguration of ACPAN Fellows

9.00am Keynote Speaker: Tides of Change: An Exciting Future for Perianaesthesia Nursing, Let's make it happen!  
**Dr Paula Foran** (PhD, RN, FACPAN, FACORN)  
*Australian College of Perianaesthesia Nurses – Chief Examiner  
Australian College of Perioperative Nurses - Education Officer  
Critical Care Education Service – Senior Lecturer  
University of Tasmania – Unit Co-ordinator Perianaesthesia CNA532 & CNA534*

10.00am – 10.30am Morning Tea (*Sponsored by National Association of PeriAnesthesia Nurses of Canada*)  
Opening of Poster Presentations & Silent Auction  
*Trade Exhibition Area, Crystal Ballroom, Crystal Palace*

**Session 2: Plenary Big Top Auditorium**  
**Chair: Joni Brady**

10.30am Experience of Teaching a Recovery Room Course to Nurses in Cameroon, Africa  
**Owen Ashwell and Harriet Zych**

11.15am Enhanced Recovery after Surgery (ERAS)  
**Dr Hans Donald de Boer, Hanneke van Kooten and Brenda Zoer**

12.00pm ICPAN Biannual General Meeting

12.45pm – 1.30pm Lunch and Poster Presentations  
*Trade Exhibition Area, Crystal Ballroom, Crystal Palace*

**Session 3: Concurrent 1.30pm – 3.00pm**

	3A: Advocacy, Innovation	3B: Education	3C: Research
<b>Room:</b>	<i>Big Top Auditorium</i>	<i>Big Top Foyer Level 2</i>	<i>Ted Hopkins Room</i>
<b>Chair:</b>	<i>Jodi Lloyd</i>	<i>Maria Kapritsou</i>	<i>Ann Hogan</i>
<b>1.30pm-2.00pm</b>	Anaesthetic Nursing: Keep in touch, watch over, and be one step ahead <b>Professor Ulrica Nilsson</b>	Paediatric PACU Nursing: are you competent? <b>Allan J Cresencia</b>	The effect of non-pharmacologic distraction forms in reducing postoperative pain in children <b>Charlotte Rosenkilde</b>

	<b>Session 3A continued</b>	<b>Session 3B continued</b>	<b>Session 3C continued</b>
<b>2.00pm-2.30pm</b>	What do I say? Standardizing postoperative follow up phone calls <b>Dr Denise O'Brien</b>	Focus Group summary: A new 'external' airway management strategy for patients in the perioperative environment <b>Walter Flicker</b>	In retrospect – perianaesthesia nursing practice in The Philippines: Onwards to a model and standards <b>Dr Paul Michael Tan</b>
<b>2.30pm – 3.00pm</b>	Advance care planning in the perianaesthesia environment <b>Ramona Hackett</b>	A foundation of learning – the mentor <b>Jenny Sutton</b>	Decreasing postoperative urgency following ureteroscopy: A randomized controlled trial <b>Dr Susan Fetzer</b>

**3.00pm – 3.30pm**      **Afternoon Tea and Poster Presentations**  
Trade Exhibition Area, Crystal Ballroom, Crystal Palace

**Session 4: Concurrent 3.30pm – 5.00pm**

	<b>4A: Advocacy, Innovation</b>	<b>4B: Education</b>	<b>4C: Research</b>
<b>Room:</b>	<i>Big Top Auditorium</i>	<i>Big Top Foyer Level 2</i>	<i>Ted Hopkins Room</i>
<b>Chair:</b>	<i>Donna Hopley</i>	<i>Sue Fossum</i>	<i>Melanie Murray</i>
<b>3.30pm-4.00pm</b>	Identifying paediatric preoperative risk factors that link to PACU complications <b>Myrna Mamaril</b>	Optimizing the anaesthesia induction experience for paediatric patients <b>Abby Hess</b>	Cost-effectiveness of a systematic e-assessed follow up of postoperative recovery after day surgery: a multicentre randomized controlled trial <b>Karuna Dahlberg</b>
<b>4.00pm-4.30pm</b>	Obstructive Sleep Apnea: Implementation of a safe protocol for perioperative patients <b>Judy Moreno and Lori Story</b>	Climbing PICOT mountain: Enhancing nursing inquiry at the bedside <b>Cidalia Vital and Meg Beturne</b>	"How Are You?"- A systematic e-assessment of postoperative recovery <b>Dr Maria Jaensson</b>
<b>4.30pm – 5.00pm</b>	Perianaesthesia care for insulin dependent Diabetics and Hypoglycemia / Hyperglycemia management <b>Mary Otten and Abby Hess</b>	The Autonomic Nervous System: Fine-tuning physiology with pharmacology <b>Dr Kim Noble</b>	Comparative study of Cortisol/ACTH and Neuropeptide Y levels in Hepatectomized or Pancreatectomized cancer patients following Enhanced Recovery Program After Surgery (ERAS) versus conventional postoperative care <b>Dr Maria Kapritsou</b>

**5.00pm**      **Close of Day One (Evening at leisure)**

**5.30pm**      **ICPAN Board of Directors Meeting**  
Crystal Ballroom Mezzanine Level

## PROGRAM - Day 2 Friday 3<sup>rd</sup> November 2017

8.00am **Registration Desk Opens**

**Session 5: Plenary Big Top Auditorium**  
*Chair: Vera Meeusen*

8.30am **Opening Address**

8.40am **Keynote Address: Videolaryngoscopy: A Master Piece for Total Airway Management**  
**Professor André van Zundert, MD, PhD, FRCA, EDRA, FANZCA**  
*Royal Brisbane & Women's Hospital and The University of Queensland, Brisbane, QLD*

9.25am **ACPAN AGM – ACPAN members only**

**9.25am – 10.30am Morning Tea and Poster Presentations (Sponsored by National Association of PeriAnesthesia Nurses of Canada)**  
*Trade Exhibition Area, Crystal Ballroom, Crystal Palace*

**Session 6: Plenary Big Top Auditorium**  
*Chair: Joni Brady*

10.30am **The Gathering of Nations**  
*Delegate Forum: An "Old" ICPAN Tradition*  
**Presenters**  
*Dr Ellen Poole* - Review of Copenhagen Forum results, related findings from the literature  
*Bente Buch and Mette Ring* – Global Hot Topics: Interactive Table Discussions  
*Dr Joni Brady* - Building Collaboration to improve nursing connections and patient safety  
**Special Interest Networking Group Connections**

**1.00pm – 2.00pm Lunch and Poster Presentations**  
*Trade Exhibition Area, Crystal Ballroom, Crystal Palace*  
**Global Advisory Council Meeting**  
*Crystal Ballroom Mezzanine Level*

**Session 7: Concurrent 2.00pm – 3.00pm**

	7A: Advocacy, Innovation	7B: Education	7C: Research
<b>Room:</b>	<i>Big Top Auditorium</i>	<i>Big Top Foyer Level 2</i>	<i>Ted Hopkins Room</i>
<b>Chair:</b>	<i>Ann Hogan</i>	<i>Angie Winter</i>	<i>Paula Foran</i>
<b>2.00pm-2.30pm</b>	Infection control: It is your problem <b>Alita Campbell</b>	Understanding Adrenal Insufficiency and its significance in the perioperative setting <b>Lisa Martin</b>	Model of care for a multibed bay post anaesthetic recovery unit in a new major South Australian hospital <b>Louise McGuire</b>
<b>2.30pm-3.00pm</b>	Current management of Peri-Procedural Anticoagulation Reversal <b>Ina Cherepaha-Kantorovich and Nydia Khargie</b>	PACU demystified: Revealing ourselves to foster collaboration <b>Andrew Higgins and Elise Arndell</b>	Interdisciplinary obstructive sleep apnea protocol: All hands on deck <b>Dr Linda Lakdawala</b>



**3.00pm – 3.30pm Afternoon Tea and Poster Presentations**  
*Trade Exhibition Area, Crystal Ballroom, Crystal Palace*

**Session 8: Concurrent 3.30pm – 5.00pm**

	<b>8A: Advocacy, Innovation</b>	<b>8B: Education</b>	<b>8C: Research</b>
<b>Room:</b>	<i>Big Top Auditorium</i>	<i>Big Top Foyer Level 2</i>	<i>Ted Hopkins Room</i>
<b>Chair:</b>	<i>Ramona Hackett</i>	<i>Majken Dam Frederikson</i>	<i>Ellen Seib</i>
<b>3.30pm-4.00pm</b>	Creating a blended unit to improve patient throughput <b>Lila Berry Martin</b>	Ceasing the routine commencement of Oxygen Therapy in a recovery unit <b>Julie Preston</b>	Linking patient safety to clinical practice: What do our new grads know? <b>Melanie Murray</b>
<b>4.00pm-4.30pm</b>	A journey into the operating room <b>Sonia Reyes</b>	Your patient's temperature: What are you really measuring? <b>David Macklyn</b>	Deterioration and Response Activation Post Elective Surgery (DRAPES) Study <b>Elizabeth Egan</b>
<b>4.30pm-5.00pm</b>	Challenges and perspectives in Perianaesthesia – the case of the Postanaesthesia Care Unit <b>Eske Kvanner Aasvang</b>		The Impact of anxiety on anaesthesia: Evidence-based strategies to allay our patients' concerns <b>Dr Heather Reynolds</b>

5.00pm **Close of Day Two**

7.00pm **Conference Dinner, Sydney Showboats**  
*King Street Wharf 5*

## PROGRAM - Day 3

Saturday 4<sup>th</sup> November 2017

8.00am Registration Desk Opens

### Session 9: Plenary Big Top Auditorium Chair: Fiona Newman

8.30am **Opening Address**  
*Fiona Newman, ACPAN President*  
**Poster Presentation Winner Announced**

8.50am **Keynote Address: Home Recovery of Ambulatory Surgery Patients: What Perianesthesia Nurses Need to Know**  
**Jan Odom-Forren, PhD, RN, CPAN, FAAN**  
*Associate Professor, College of Nursing; University of Kentucky  
Lexington, KY, USA; Perianaesthesia Nursing Consultant, Louisville, KY, USA*

9.20am **Global Outreach to Promote Patient Safety: The Checklist Effect**  
**Lifebox: Australia and New Zealand**  
**Dr Rob McDougall**  
*Lifebox Volunteer; Deputy Director Anaesthesia and Pain Management, The Royal Children's Hospital, Melbourne*

10.20am – 10.45am **Morning Tea and Poster Presentations**  
*Trade Exhibition Area, Crystal Ballroom, Crystal Palace*

### Session 10: Concurrent 10.45am – 11.15am

	10A: Advocacy, Innovation	10B: Education	10C: Research
<b>Room:</b>	<i>Big Top Auditorium</i>	<i>Big Top Foyer Level 2</i>	<i>Ted Hopkins Room</i>
<b>Chair:</b>	<i>Meg Bumpstead</i>	<i>Angie Winter</i>	<i>Heather Reynolds</i>
<b>10.45am – 11.00am</b>	Novice Presenter	Novice Presenter	Novice Presenter
<b>11.00am – 11.15am</b>	Novice Presenter	Novice Presenter	Novice Presenter

### Session 11: Plenary Big Top Auditorium Chair: Joni Brady

11.15am **Nursing Advocacy / Global Implications**  
**Sue Fossum, BSN, RN, CPAN**  
*President, ICPAN; University of California Medical Center, Davis, CA, USA*

11.45am **Closing Remarks – Dr Joni Brady**  
**Closing Ceremony**

12.00pm **Conference Close**

## Poster List

Poster Number	Poster Title	Presenter
1	Creating a Tide of Change by Engaging Staff in Continuous Improvement	Lila Berry Martin
2	Attacking Surgical Site Infections One Bug at a Time	Joni Brady
3	Current Management of Peri-Procedural Anticoagulation Reversal	Ina Cherepaha-Kantorovich
4	CROPS- Collaboration and Resource Optimization of Preadmission Services	Janice Chew
5	POUR Treatment - Less is More	Lene Doktor
6	The Effect of Helmet CPAP Continuous Versus Intermittent CPAP Mask After Major Abdominal Surgery	Lene Doktor
7	Simulation increases confidence of physicians and nurses in handling pediatric trauma	Anna Gissler
8	Patient Involvement in the Drafting of Information Material to Optimise Treatment of Patients Undergoing Cardiac Surgery; a Questionnaire Study	Lone Hedegaard Andersen
9	Testing the Reliability and Validity of the Child Induction Behavioural Assessment (CIBA) Tool	Abby Hess
10	PACU Demystified: Revealing Ourselves to Foster Collaboration	Andrew Higgins
11	The Effect of Parent Visiting Program in PACU on Delirium Among Pediatric Patients After General Anesthesia	Woo Young In
12	"I'm Not Ill, Just Damaged for the Rest of My Life"	Eva Joelsson-Alm
13	Evidence-Based Post Anesthesia Care Unit Practice Guidelines for Determining Length Of Stay and Discharge Location for Surgical Obstructive Sleep Apnea Patients	Esther Lee
14	An Educational Plan for Perioperative Nursing Staff in UCSD: Jacobs Medical Center: A Multi-Modal Performance Improvement Project to Improve Nursing Education	Esther Lee
15	Descriptive Characteristics of Obstructive Sleep Apnea Patients at Risk of Longer Post-Operative Hospital Stay	Esther Lee
16	Personalized Perioperative Care: Implementing Pharmacogenetics in the Perioperative Setting	Esther Lee
17	Globalization of Health Service: Sharing of Best Practices in PeriAnesthesia Nursing Care, A Case Study of Cross-border Institutional Collaboration	Esther Lee
18	Obstructive Sleep Apnea: Emphasis on Discharge Education After Surgery	Esther Lee
19	How to Create a Safe Non-clinical Environment for Children and Parents	Lise Lund Elsberg
20	Safe Handling and Disposal of Mitomycin C in the PACU Following Intravesical Administration in the OR	Gloria Luu
21	Expediting PACU Phase I Care	Myrna Mamaril
22	Postoperative Urinary Retention: Addressing POUR in the PACU with Evidence	Denise O'Brien
23	PACU Handover Timeout: Promoting Safe Care Transitions	Denise O'Brien
24	App for Children's Pain Management	Bodil Pallesen
25	Ceasing the Routine Commencement of Oxygen Therapy in a Recovery Unit	Julie Preston

26	Education Flexibility is Key for Perianaesthetic Advanced Life Support (ALS) Competency Completion	Julie Preston
27	A Journey into the Operating Room	Sonia Reyes
28	Perioperative Pain-management of Patients Undergoing Amputation: What is the Recent Evidence in Clinical Practice?	Helle Rømer
29	Exploring the Effect of Peripheral Nerve Catheters Used in Postoperative Pain Management	Maibrit Sørensen
30	Evidenced Based Practice-This is How We Do It!	Diane Swintek
31	In Retrospect – Peri-Anesthesia Nursing Practice in the Philippines: Onwards to a Model and Standards	Paul Michael Tan
32	Improving Surgical Patient Flow Within the Perioperative Care Delivery	Pamela Windle
33	Point of Care Improvement for Surgical & Endoscopy Patient Flow	Pamela Windle
34	Quality Improvement: Perioperative Collaboration in Promoting Consistent Specimen Identification for Patient Safety	Pamela Windle
35	Leveraging Technology and Manager Collaboration to Reduce Catheter-Associated Urinary Tract Infections in the Perioperative Settings	Pamela Windle

## **Abstracts for Oral Presentations (alphabetical by presenter surname)**

### **Challenges and Perspectives in Perianesthesia – the Case of the Postanesthesia Care Unit**

**Assoc. Prof Eske Aasvang<sup>1</sup>**

<sup>1</sup>Rigshospitalet, Copenhagen University, Copenhagen, Denmark

Over the last decades, the concept of fast-track surgery has improved patient recovery whilst reducing need for hospitalization. However, the focus has mainly been on the subacute postoperative recovery where surgical patients have a well-documented risk for morbidity, occurring in an estimated 10-30% of major abdominal and orthopedic procedures, but at various incidences depending on patients risk profiles and surgical procedure. Thus little attention has been devoted to the acute postoperative phase in the specialized postanesthesia care unit (PACU), despite the occurrence of two critical transitions (operating-room to PACU and PACU to ward), and the need for admittance to be evidence based to improve rehabilitation and health-care resource utilization. In detail, a perianesthesiological focus on the PACU phase holds the possibility for detection of systematically occurring adverse events and organ dysfunctions, and development of interventions to reduce complications and unnecessary treatment/observation. Thus, recent studies have shown a reduced need for PACU admittance after mastectomy with a optimized multimodal analgesic protocol, a change in the threshold for safe urinary bladder catheterization to 800 ml in case of postoperative urinary retention without increased complications and no need for motor-function observation after spinal anesthesia before discharge to the ward. Furthermore, data suggest that a major future focus should be on inflammatory control to reduce overall complications as inflammation impedes on all organ systems.

Identification of procedure-specific adverse events will allow evidence based development of perianesthesiological protocols to improve outcomes. The above issues will be discussed and the most recent evidence presented to stimulate further PACU-related research.

## Creating a Blended Unit to Improve Patient Throughput

**Lila Berry Martin<sup>1</sup>**

<sup>1</sup>The University of Kansas Health System, Kansas City, Kansas, USA

The operating room is a revenue generating engine for many hospitals, so delays and inefficiency are costly. At The University of Kansas Hospital, OR holds, patients waiting for beds and high acuity were stressing the perioperative arena.

The traditional separate units for preop and postoperative care did not allow for flexibility to meet growing volumes and manage frequent bed holds (patients waiting for an inpatient bed). The two units were combined to create one unit, Main Pre/Post (MPP). First, we ensured that all patient bays/rooms had the same capabilities for providing care, like monitoring, oxygen, etc. Staff was then cross trained to provide care for both patient populations. Data from the analysis of surgical and pre/post-operative volumes was used with the ASPAN staffing recommendations, to create a new staffing matrix and schedules.

Same Day Surgery (SDS) and the Post Anesthesia Care Unit were combined to create one unit, Main Pre/Post (MPP).

Cross-training competency checklists were created and staggered orientation schedules developed. Staff members were assigned a preceptor on their non-dominant unit for 2-6 weeks, dependent on previous competency levels.

A Scheduling Committee lead by frontline staff was formed. The Scheduling Committee revised the staffing matrix, streamlining shift start times and shift length to support patient flow and acuity changes. Staff members bid on and were granted shifts based on seniority order.

Merging traditional pre-operative and post anesthesia care units into one Pre/Post unit can increase perioperative patient throughput and safety. It allows utilization of all patient bays/ rooms and flexibility to meet patient flows due to competent staff who can provide care at all levels.

By merging traditional Pre-Op and Post Anesthesia Care units, cross-training all staff, and developing a staff led Scheduling Committee, a fluid, more cohesive group of staff are available to adapt as patient flow changes. This flexible environment allows all beds on the unit to be utilized at all times, regardless of patient acuity. The Main Pre/Post Scheduling Committee continues to be a vital part of scheduling and staffing decisions as Pre/Post-Operative volumes continue to increase.

## **Infection Control: It is Your Problem**

**Alita Campbell-McAdory<sup>1</sup>**

<sup>1</sup>University of Texas MD Anderson Cancer Center, Missouri City, Texas, USA

Patients often come to the preoperative area with an active isolation status that has been in place for weeks, months or years. This is distressing for patients and families, as well as, costly for the institution. Data was collected on all patients that arrived in PreOp holding whose medical record indicated isolation. The data collection tool included: the start date and type of isolation. The data showed a large number of patients indicated isolation status, yet no initiative had been taken to obtain the cultures required to update and remove the patient from this status. The preoperative team consulted with the Infection Preventionist to review our data and evaluate the current process for removing a patient from isolation. A collaboration with the Infection Control and the Outpatient Champions was formed. The goal was to gain the support of clinics, to promote reassessment, to improve the frequency of removal from isolation status in a clinic setting and to initiate patient education. Our organization has developed a nurse-driven order set for collecting follow-up cultures to initiate the removal of a patient from isolation status. Unfortunately, many staff are not aware of this order set. Additional barriers to the process occurred when our institution implemented a new electronic medical record system, resulting in developing a new nursing order set and tip sheet to facilitate continuity of the initiative.

After completing education of the isolation screening process, preoperative nurses reviewed the daily surgical schedule for isolation patients. For patients that can be removed from isolation based on symptoms only, such as C. diff, influenza virus or respiratory viruses, the team evaluated the patient prior to bringing the patient to the Pre-Op area upon check-in to the facility. If they are symptom free, Infection Control is called and the isolation status is reviewed, assessed for indication and removed when indicated. For patients whose isolation status requires a follow-up culture, such as MRSA or VRE, the nurse driven order set is initiated to facilitate assessment of necessity.

Collaboration with multiple disciplines to streamline the process and provide evidence-based education regarding isolation status removal resulted in improved nursing understanding of resources available and expedited process for patients. This resulted in a reduced number of unnecessary patients on isolation statuses and increased compliance with the infection control policy.

An update to our practice produced less distress for patients and families while encouraging fiscal responsibility for the institution by having a decreased number of patients on isolation status going to the operating room. Prior to our intervention, 63% of patients on isolation had retained their status for greater than six months. 45% of patients could have been removed from isolation had the protocol been followed. Post-intervention, the number of patients on isolation decreased to 11% with a duration of less than six months. Additionally, nurses were able to identify and remove barriers from nursing practice associated with isolation patients, which increased job satisfaction.



# Current Management of Peri-Procedural Anticoagulation Reversal

**Ina Cherapaha-Kantorovich and Nydia Khargie<sup>1</sup>**

<sup>1</sup>University Health Network, Toronto, Ontario, Canada

Management of peri-procedural anticoagulation reversal is a common clinical problem requiring expert assessment of the patient's thromboembolic risk and procedure related bleeding risks. The patient's thromboembolic risk and type of anticoagulant therapy determines the optimal strategy to minimize time off anticoagulants. The procedural bleed risk must be considered to determine the duration of interruption of anticoagulation therapy and when it is safe to resume full anticoagulation. Anticoagulation may be continued in patients undergoing selected minor procedures. For major procedures necessitating anticoagulation interruption, low molecular weight heparin or direct oral anticoagulant bridging therapy should be considered for patients with a high thromboembolic risk. Reversal of the direct oral anticoagulants, such as dabigatran, rivaroxaban, and apixaban, is simplified by the relatively short half-life, rapid onset of action, and predictable pharmacokinetics of these agents. A practical, patient-focused approach to peri-procedural anticoagulant management will be presented.

# Paediatric PACU Nursing: Are You Competent?

**Allan Joseph V Cresencia<sup>1</sup>**

<sup>1</sup>Children's Hospital Los Angeles, Los Angeles, California, USA

Paediatric PACU nursing is such a specialized area that requires specific knowledge, skills and expertise in managing the safe care of children. There are many discussions amongst experienced/seasoned adult PACU nurses regarding competency with paediatric PACU nursing care. This presentation will enlighten some of the “grey” areas of paediatric PACU nursing competency.

The class was originally presented at ASPAN's 34th National Conference held at San Antonio, Texas, USA. Since then, a RN PACU Educator from New Zealand requested permission to adapt the acronym “PEDS-PACU” in their orientation program.

The class will verify your competency in managing the care of paediatric patients in the perioperative setting. This class will discuss the foundation of paediatric PACU nursing using the acronym “PEDS-PACU.” This presentation will also focus on analysing case scenarios and answering paediatric specific questions as it pertains to perioperative nursing.

This presentation provides a significant positive impact in paediatric PACU nursing competency. The acronym “PEDS-PACU” is easy to use, remember, and apply to clinical practice. Clinical practice that mostly caters to adult clients will have a handy tool using the acronym when caring for a paediatric client. This course will also encourage PACU nurses that usually care for adult clients to start taking care of paediatric clients after learning the presentation. The course can also be included in an orientation program in a PACU setting to assist with competency with a specific, highly specialized paediatric population. The presentation can be utilized to verify nurse's competency by updating the case scenarios, case studies, and paediatric specific questions as it pertains to clinical practice.

# **Cost-Effectiveness of a Systematic E-Assessed Follow Up of Postoperative Recovery After Day Surgery: A Multicentre Randomized Controlled Trial**

**Karuna Dahlberg<sup>1</sup>**

<sup>1</sup>Örebro University, Örebro, Sweden

## ***Purpose of Project***

A majority of all surgeries are performed as day surgery. After discharge patients are expected to take care of their postoperative recovery by themselves or together with relatives. Recovery Assessment by Phone Points (RAPP) is an app developed for assessing and follow up on postoperative recovery and also enables the patient to get in contact with the day surgery department. Patients report postoperative symptoms at home which can be analyzed to evaluate anaesthetic and postoperative care.

## ***Research Aim***

The aim of this study was to estimate cost effectiveness of the RAPP used for follow up on postoperative recovery after day surgery compared to no follow up with the RAPP.

## ***Research Design, Sample***

This was a two-group, parallel, multicentre, randomised single-blinded controlled trial, including 997 participants >17 years of age undergoing day surgery. The patients were randomly allocated to either using RAPP, during 14 days postoperatively or standard care i.e no follow up. The analysis considered costs for the stakeholder of the intervention, Quality of Life (QoL) and savings in health care use. Gained quality-adjusted life-years (QALYs) were used to measure the health effects.

## ***Results***

Preliminary results show that there was a difference in healthcare costs between the groups, with lower costs in the intervention group. Also when accounting for intervention costs net savings were found for the intervention group. There were no differences in gained QALYs between the groups.

## ***Limitations of Study***

Estimated market price for RAPP, since it is still only used in research. Missing data regarding health care consumption and QoL due to 72% response rate.

## ***Implications for perianaesthesia nurses and future research***

Costs effectiveness analysis plays an important role in the decision-making process when introducing interventions in perianaesthesia nursing. Further research regarding RAPP should include qualitative interviews with patients and staff.

# **Deterioration & Response Activation Post Elective Surgery (D.R.A.P.E.S) Study**

**Elizabeth Egan<sup>1</sup>**

<sup>1</sup>Princess Alexandra Hospital, Brisbane, Queensland, Australia

## ***Purpose***

The DRAPES study objective is to determine the rate of Deterioration and Rapid Response Team (RRT) activation, ICU admission, cardiac arrest and subsequent mortality within 6 hours post PACU discharge, where PACU length of stay (LOS) was greater than 2 hours for clinical reasons.

## ***Aim***

The research aim is to ascertain if a prolonged stay in PACU is associated with a significant deterioration in the ward setting in the following 6 hours.

## ***Design***

A single-centre purposive-sampled retrospective medical record audit in an Australian, urban, tertiary, university-affiliated hospital.

Investigators reviewed all patients with a PACU stay greater than 2 hours from January 2014 to June 2015.

Clinical reasons for a prolonged LOS were defined as conditions requiring active intervention ie. hypo/hypertension requiring medications, persistent hypoxia or respiratory depression requiring oxygen, NIV or reversal, unresolved pain, persistent nausea/vomiting, anaemia requiring blood transfusion, unexplained neurological changes, and clinical condition requiring review

## ***Results***

Results are pending with the statistician however are anticipated to be available in March 2017. Our data will be analysed for p-values and 95% Confidence Intervals for the following:

The incidence of RRT criteria breach and RRT activation per 1,000 admissions. Hospital Mortality rate amongst the study group and the control group per 1,000 admissions Unanticipated ICU admissions for the study group versus the control

## ***Limitations***

Limitations of our study include that it is a single-site retrospective study, and our patient cohort is limited to an adult population and excludes obstetrics. Our study did not include emergency presentations and such patient populations represent areas for future study.

## ***Implications***

Dependant on results of this study it could be argued that a PACU stay of over 2 hours for clinical reasons may be an independent indicator of future ward deterioration and therefore may help in justifying an escalation in the level or location of post-operative care in these patients.

# Decreasing Postoperative Urgency Following Ureteroscopy: A Randomized Controlled Trial

**Dr Susan Fetzer<sup>1</sup>**

<sup>1</sup>Southern New Hampshire Medical Center, Nashua, New Hampshire, USA

## **Purpose**

The uncomfortable urgent need to void following ureteroscopy, despite an empty bladder, arises from bladder spasms often resistant to narcotic interventions. Patients experience emergence agitation leading to tachycardia, hypertension and the attempt to go to the bathroom when not fully recovered from anesthesia creating safety risks. A standard postoperative intervention, using belladonna and opium (B+O) suppositories, requires 15 to 30 minutes for opium and 1 to 2 hours for belladonna to act, longer than many ureteroscopy procedures. Therefore the purpose of the study was to determine the effectiveness of a preoperative B+O suppositories on postoperative bladder comfort, narcotic requirements and length of stay of ureteroscopy patients.

## **Methodology**

A double blind randomized controlled study.

## **Sample**

Fifty adult outpatient ureterostomy patients were randomized to receive routine care or a B+O suppository prior to insertion of the surgical scope. Postanesthesia nurses, blinded to group, provided routine post-operative care including assessment of urinary urgency and pain every 15 minutes and prior to discharge.

## **Results**

The experimental group reported lower mean urgency scores than the control group ( $p = .018$ ). All control group subjects expressed urgency during the post-operative period compared to 22 of 25 patients who received a preoperative B+O suppository. Mean pain scores, administration of narcotic equivalent medications or length of stay were similar.

Pre-emptive B+O suppositories reduced bladder spasms as reflected in patients' reports of urgency.

## **Limitations**

The study was limited to patients of one urologist at one facility.

## **Implications**

Patients discriminated urgency from post-operative pain, indicating the constructs differ. Urinary urgency can be discriminated from surgical pain and should be assessed post operatively. An order for a pre-emptive B+O suppository on standing pre-operative ureteroscopy order sets is recommended. The efficacy of pre-emptive B+O suppositories on other urological procedures warrants further research.

## Focus Group Summary: A New 'External' Airway Management Strategy

**Walter Flicker<sup>1</sup>**

<sup>1</sup>Sommetrics Inc, Vista, California, USA

Critical respiratory events are estimated to occur 0.8-6.9% in all patients within the PACU. Patients with known or suspected obstructive sleep apnea may have an increased risk for more frequent, severe and/or prolonged events. Effects of sedation or anaesthesia include hypercapnia, hypoxemia, hypoventilation and upper airway collapse/obstruction. Thus airway management in sedated patients is a safety and quality issue for staff working in such environments. Respiratory complications often are not identified in patients undergoing procedures with mild to moderate sedation. Options for maintaining a compromised airway include chin lift and jaw thrust, nasal trumpet, laryngeal mask airway and either CPAP or NIV as indicated in OSA patients. Respiratory compromise is a high concern for staff and may have significant patient safety consequences.

The purpose of the focus groups was to better understand the practice environment including current modalities of upper airway management, perceived barriers, concerns of staff and an opportunity for the attendees to assess a new "external airway" device for the maintenance of airway patency during mild to moderate sedation. The focus groups assessed the potential role for a new, non-invasive airway management system which applies a vacuum, analogous to CPAP, on the anterior surface of the neck. It overlies the upper airway prone to collapse.

This series of focus groups aimed to understand the perioperative environment with regards to upper airway management. Nurses who work in environments where either mild to moderate sedation is an important component of care or the post-anaesthesia recovery areas are concerned with appropriate airway management to prevent adverse events and promote patient safety.

Several themes emerged from the focus group summaries. The following issues regarding airway maintenance were cited 1) lack of formalized assessment of airway prior to procedures and 2) staff implementation of prolonged head tilt/jaw thrust to prevent airway closures resulting in neck and back discomfort in staff members, reduced ability to attend to other patients and overall workplace dissatisfaction during their shift. In addition, regarding patients with known obstructive sleep apnea the following were cited. 1) failure of patients to bring their continuous positive airway (CPAP) devices from home when undergoing procedures, 2) inconsistent application of CPAP devices by staff and 3) prolonged wait time for respiratory therapy to apply and/or implement CPAP therapy if policy dictates and 4) undiagnosed OSA poses a significant concern for nurses in the PACU environment. Attendees were shown/demonstrated a new device for external airway maintenance. The purpose was to gather and assess the pros and cons of implementation of same in a practice setting. The prospect for this new non-invasive mechanism to provide airway stability was perceived as a positive addition to the armamentarium of current options for airway management. Attendees at the CANA meeting thought the device would be especially useful for sedation nurses as well as CRNA. The attendees at the ASPAN meeting felt the device would be a useful adjunct in their everyday practices.

# **Advance Care Planning in the PeriAnesthesia Environment**

**Ramona Hackett<sup>1</sup>**

<sup>1</sup>Sunnybrook Health Sciences Centre, Scarborough, Ontario, Canada

It had been recognized that Advance Care Planning for “No CPR” patients going to for procedures requiring General Anaesthetics was abandoned during the peri-operative time and Phase 1 recovery causing confusion of how to treat the patient should they suffer a cardiac arrest. Our organization developed new policies which included the patient/substitute decision maker (SDM) in the decision making; such that, the perioperative team and perianesthesia nursing team now have clear guidelines on when to perform CPR/ACLS and when not to intervene.

Educational presentations to all stakeholders with the initial roll out including the temporary revision of “No CPR” orders during surgery. The second part of the rollout includes educating Registered Nurses in the Pre-Anesthesia Clinic via Simulation oh “how to have Advance Care Planning conversations with patients going to for surgery”

Providing Person Centred Care in the situation where Advance Care Plans exist provides greater Patient/SDM satisfaction and allows them to be in charge of their decisions. The new policies also provide greater confidence in the nurses caring for patients who have a “No CPR” order, as there is clarity in the case of cardiac arrest in the Phase 1 of recovery.

This presentation will provide insight into this innovative practice in Ontario, Canada. Countries who do not yet have guidelines or policies for Advance Care Planning in the pre-operative setting may look to this information as a template for their own practice settings.



# Optimizing the Anaesthesia Induction Experience for Paediatric Patients

**Abby Hess<sup>1</sup>**

<sup>1</sup>Cincinnati Children's Hospital, Cincinnati, Ohio, USA

Research has consistently demonstrated that negative induction experiences are associated with undesirable post-operative outcomes in paediatric patients, such as emergence delirium, increased pain, tantrums, sleep disturbances, and elevated anxiety. Behavioural changes may be long-lasting in some patients. Resistant or combative behaviours during induction can result in safety risks for older children. Determining how patients will respond to the anaesthesia mask or IV placement in the preoperative area can be challenging, as children do not always express high anxiety in the preoperative clinic and they do not always realize how anxious they will feel when they go back to the operating room. Nurses in the [preoperative area can play a key role in improving induction experiences for paediatric patients through assessment, interventions and communicating concerns to intraoperative staff members. The use of evidence based tools, algorithms, and interventions may help to improve induction experiences and post-operative outcomes for paediatric patients.

The algorithm and tool were implemented in multiple phases. The practice algorithm was developed first. This was presented to staff and is included in the training of new staff members. The clinical tool for documenting the behavioural assessment at induction was presented to staff at a meeting in 2014, then incorporated into the electronic health record. Staff feedback on the tool was obtained through a survey, and modifications were made. New staff members are trained on use of the tool during orientation.

Incorporation of an evidence based algorithm and behavioural assessment tool may help to identify patients who would greatly benefit from preoperative and induction interventions (either medication or behavioural). Understanding the different types of medication and behavioural interventions helps to match what intervention may be best for each patient.

# **PACU Demystified: Revealing Ourselves to Foster Collaboration**

**Andrew Higgins and Elise Arndell<sup>1</sup>**

<sup>1</sup>Princess Alexandra Hospital, Brisbane, Queensland, Australia

With all of the competing demands of the hospital PACU often gets bed blocked to wards and this can contribute to delays in the Operating Theatres. This in turn led to some “us” v’s “them” mentalities and conflict between departments. We decided to engage with the clinical wards to give them some concept of what our work involved. We wanted them to understand that the PACU was an Acute Care Setting and to have an insight into what exactly our work entails. Ward nurses didn’t know “ what we do. This workshop was originally focussed on that aspect but has since matured to also teach important airway management skills to our ward based colleagues.

The workshop content was developed through a consultation process with the PACU nursing team. The original idea was expanded from initially sharing/observing the PACU experience to teaching clinical ward staff new skills (Acute Pain Management, Airway Skills) useful in their daily practice as well as in crisis management situations.

It was then developed into a one day workshop format with the basic format following this approach: AM – Presentations, Lunch and Simulation exercise –skills into practice, PM – immersion in unit.

We have found through our own unit experiences and from the feedback received by the attendees that this is a rewarding exercise for all staff involved.

The workshop is always well subscribed and this has highlighted that there is a demand for this type of program.

The concept now has a “lite” spin off version that is given by the PACU Clinical Facilitator to new staff starting in the hospital. All new hospital casual nursing employees are given a one hour presentation at one of their education days.

- Whilst not measurable we hope that we have contributed to improving patient outcomes in the crucial 24hr period post operatively.
- Providing opportunities for ward staff to gain new skills and see what happens immediately post operatively and therefore gain a greater understanding and appreciation of the PACU role.
- Create working relationships/networking between PACU and ward staff. Opportunity for PACU nurses to listen to clinical ward staff, discuss issues relevant to them and have the ability to clarify concerns. It also provides the ability to learn some of the more specialised surgical ward nursing skills.
- Decrease clinical ward staff anxieties about coming to PACU by allowing them into our environment and giving them an understanding of our “language” and practices.
- Enabled PACU staff to give ward staff more relevance and understanding of the PACU Discharge Criteria.
- Decrease levels of perceived harassment and bullying within PACU from co-workers outside of the immediate team. (as per below grab from the PAH Best Practice Australia cultural survey results.)

# **“How are you?”- A systematic e-assessment of postoperative recovery**

**Dr Maria Jaensson<sup>1</sup>**

<sup>1</sup>Örebro University, Örebro, Sweden

## ***Purpose***

Day surgery, is a well-established practice internationally. The Swedish web-version of the Quality of Recovery (SwQoR) questionnaire was developed by a research group in Sweden for the purpose of measuring postoperative recovery. It has been inserted in a mobile app called Recovery Assessment by Phone Points (RAPP).

## ***Aim***

To explore whether systematic follow-up using RAPP after day surgery had a positive effect on postoperative recovery, as well as whether there are any gender differences

## ***Research design and sample***

This was a two-group, parallel, multicentre, randomised single-blinded controlled trial (RCT), including 1000 participants >17 years of age undergoing day surgery. The patients were randomly allocated to either using RAPP, during 14 days postoperatively or standard care *i.e* no follow up. Outcome was postoperative recovery assessed by SwQoR on postoperative day 7 and 14.

## ***Results***

Preliminary results shows that there was significant increased quality of postoperative recovery in those participants who were systematically followed up by using RAPP compared to the participants who were randomized to standard care both on postoperative day 7 and 14.

## ***Limitations of the study***

We did not record a baseline value for SwQoR.

## ***Implications for perianesthesia nurses and future research***

Upon receiving patients' postoperative recovery data, perianesthesia nurses can investigate differences in postoperative recovery according to different anesthesia methods, surgical procedures, patient age groups, gender, socio-economic status, etc. and to provide the knowledge basis for improving medical and care procedures.

Future research will include development and evaluation of RAPP in different languages, ages and contexts.

# **Comparative Study of Cortisol/ACTH and Neuropeptide Y levels, in Hepatectomized or Pancreatectomized Cancer Patients Following Enhanced Recovery Program after Surgery (ERAS) versus Conventional Postoperative Care**

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## ***Background***

Enhanced recovery program after surgery (ERAS) has shown to reduce morbidity and length of stay after hepatobiliary surgery, safely and efficiently. However, stress and pain response have not been evaluated between ERAS and conventional postoperative care (CON), in patients undergoing hepatectomy or pancreatectomy.

## ***Objectives***

The comparative study of Cortisol, ACTH and Neuropeptide Y (NPY) levels between ERAS and CON protocol, demonstrating surgical stress and pain response, after hepatectomy or pancreatectomy.

## ***Methods***

A prospective randomized clinical study which was conducted from January 2012 to May 2014 with a sample of 63 patients who had undergone hepatectomy or pancreatectomy, randomized into 2 groups. In ERAS group (n=29) was applied ERAS protocol, while in group CON (n=34) the conventional one. Demographic and clinical data were collected and patients were assessed by Zung depression scale, as well as by VAS & CPOT pain scales and 3 self-reported questions concerning perceived emotional status. Serum Cortisol, ACTH and NPY levels were measured by ELISA: T<sub>1</sub>)at the day of patient's admission, T<sub>2</sub>)the operation day, T<sub>3</sub>)prior to discharge.

## ***Results***

In ERAS group, NPY levels were statistically significantly higher in all 3 measurements ( $p < 0.004$ ), while, CPOT score was negatively correlated with the self-reported question "How optimistic are you feeling, for the future?" in T<sub>3</sub>time point ( $\rho = -0.617$ ,  $p < 0.001$ ). Additionally, CPOT pain levels were positively interacted with NPY levels, adjusted for ERAS and CON protocol ( $p = 0.012$ ).

## ***Conclusions***

The findings of this study highlight that ERAS protocol yields the best benefits for patients, safely and without increasing patients' stress and pain levels, in comparison to CON protocol. Cortisol and ACTH levels have not been significantly different, between the two groups, while NPY levels were higher, in ERAS group, which further evaluation is needed, as this biomarker could possibly be an objective indicator of postoperative pain and stress, in major abdominal surgery.

# **Interdisciplinary Obstructive Sleep Apnea Protocol: All Hands on Deck**

**Dr Linda Lakdawala<sup>1</sup>**

<sup>1</sup>UPMC Shadyside Hospital, Oakmont, Pennsylvania, USA

## ***Purpose of Project***

Obstructive Sleep Apnea (OSA) increases the risk of respiratory depression for patients when exposed to anesthesia, sedation or opioids. Screening was not performed, leaving patients at risk for postoperative respiratory depression. Screening is not the end all for safe care. Staff, patients and families require education regarding OSA.

## ***Research Aim and Question/Hypothesis Methodology***

Validate a protocol to provide consistent care and follow through for the OSA patient.

## ***Conceptual Model, Research Design, Sample***

Quality Improvement Project: 161 patients screened with Stop-Bang questionnaire in the preoperative area: (Snoring, day time sleepiness, observed stop breathing during sleep, hypertension, BMI, age > 50, neck circumference > 17 inches and male gender). Score of 5 or greater denotes high risk for OSA.

## ***Results Discussion / Conclusion***

Of those 161 patients screened, 48 scored 5 or greater (30%). Six out of 21 patients monitored had elevated end tidal CO<sub>2</sub> alerting the nurse to “wake up” the patient preventing a respiratory event. 38% completed a sleep study. Patient satisfaction was 88% and nurse satisfaction noted the ease of use of Stop-Bang, importance of education and monitoring the OSA patient. Surgical patients must be screened for OSA, adding capnography was useful however nursing and patient education was imperative. Consequential outcomes: Integrating an electronic health record protocol.

## ***Limitations of Study***

Data collected for one postoperative department. Patient population was primarily surgical spinal neurological procedures. Multiple studies throughout the hospital limited the department selection.

## ***Implications for perianaesthesia nurses and future research***

Undiagnosed surgical OSA patient lends a chasm of vulnerability for respiratory depression. The perioperative protocol is a safety net for nursing, the Interdisciplinary team and all aspects of the OSA patient experience. Education is a key mechanism to promote communication. Future plans: Assess outcomes once the protocol goes live for all surgical patients.

# **Your Patient's Temperature: What are you Really Measuring?**

**David Macklyn<sup>1</sup>**

<sup>1</sup>Sunshine Coast University Hospital, West Woombye, Queensland, Australia

Taking a patient's temperature is a common task for clinical staff. Clinical decisions are made depending on the result of the measurement. An example of this is where hospital policy dictates that blood cultures be taken when a patient reaches a certain temperature. Another example is deciding to subject the patient to forced air warming or other active warming treatments if the patient is deemed to be 'cold'.

But what are we really measuring and do the clinical decisions stand up to scrutiny.

Basic nursing education on the topic of 'taking' a patient's temperature teaches us that each measurement site gives different readings but clinical decisions may be based on the 'number' without applying that knowledge.

Some tympanic temperature measuring devices purport to display core temp but cannot possibly do so by measuring the tympanic membrane. How do they do it? Is a temperature recorded in the bladder reflective of true core temperature?

The purpose of this session is to challenge us all to pay more attention to this 'routine' task.

Education sessions for all anaesthetic nursing staff and PACU staff was undertaken to raise awareness of the issue. This resulted in better evaluation and measurement of patient temperatures and a better appreciation of the clinical decisions made based on the resulting measurement.

Taking a patient's temperature is a common task for clinical staff. Clinical decisions are made depending on the result of the measurement. But do we really understand what is being measured and are we making the correct decisions?

This presentation will result in an increased awareness of the complexities around 'taking a patient's temperature'. For most perianaesthesia nurses this task is a matter of routine. The knowledge gained from this session will help improve patient safety and clinical decision making.

# Identifying Pediatric PreOperative Risk Factors that Link to PACU Respiratory Complications

**Myrna Mamaril<sup>1</sup>**

<sup>1</sup>The Johns Hopkins Hospital, Ellicott City, Maryland, USA

Pediatric perianesthesia nursing leadership at a large teaching hospital identified that there were a number of pediatric patients experiencing respiratory complications during their emergence from anesthesia. The American Academy of Pediatrics promulgated the Policy Statement identifying “Critical Elements for the Pediatric Perioperative Anesthesia Environment” to advocate for the safe health care of children undergoing anesthesia for surgical procedures. This 2015 report reviewed published perioperative studies that spanned over the past 50 years concentrating on children undergoing anesthesia and surgery. Pediatric risk categories were stratified according to age with emphasis on developing written policies addressing types of surgery performed that require credentialed pediatric anesthesia providers for elective and emergency procedures. The Pediatric PreOperative Risk Factor Quality Improvement Tool was implemented to increase PACU nursing preparation and vigilant nursing interventions in these most vulnerable children.

Baseline data of electronic nursing documentation different types of events of Pediatric PACU Phase I patients’ length of stay (LOS) and respiratory events were collected. Other information included was airway management using a bag-valve mask, nebulizer treatments, breath-holding, apnea or critical events reported. The Pediatric Preoperative Risk Factor Quality Improvement Tool was designed that identified the independent risk factors that linked to postanesthesia respiratory complications. In the Pediatric Preoperative Nurses complete the risk factor assessment during their nursing assessment. This tool was giving to the anesthesia provider and also included the primary PACU nurse. Staff education was conducted to include: the purpose of the tool; how to complete the tool; when to communicate the risk factors; and important pediatric PACU nursing interventions. Meet with staff monthly to report progress. Communicate monthly outcomes in staff meetings and on benchmark tracking board.

The Pediatric Preoperative Risk Factor Quality Improvement Tool has increased awareness of the child’s unique risks when undergoing anesthesia and surgery. PACU nurses reported they felt more prepared to recognize their patients’ deteriorating condition because of the nurses’ hypervigilant physical assessments and interventions.

# **Understanding Adrenal Insufficiency and its Significance in the Perioperative Setting**

**Lisa Martin<sup>1</sup>**

<sup>1</sup>Department of Veterans' Affairs, Apopka, Florida, USA

Early recognition and understanding of a patient's underlying risk factors and co-morbidities can provide perioperative nurses with a preemptive strike against poor patient outcomes. Adrenal insufficiency is a rare, poorly understood disease process that can become fatal without appropriate recognition of its symptoms and potential triggers. Assessment, appropriate perioperative management of care and clinical awareness of the adrenal insufficiency patient will help avert an adrenal crisis.

The clinical presentation of a patient in an adrenal crisis is consistent with shock: hypotension, cardiac arrhythmias, hypoglycemia. However, if a clinician treats the symptoms without recognition of the cause, the patient will not respond as typically expected. It is critical to understand that the presentation of shock symptoms in a patient with adrenal insufficiency is indicative of an adrenal crisis and requires immediate treatment with hydrocortisone, as well as supportive medical measures.

This oral presentation includes a physiological review of the functions of the adrenal gland and its effect on the body. It will also address the trigger events that can cause a patient to go into an adrenal crisis, such as physical/mental/spiritual stressors and specific medications that are associated with the delivery of anaesthesia. Recognition, treatment, management and prevention will be addressed.

Patients with adrenal insufficiency are often overlooked or not recognized for their risk factors that can lead to shock and if left untreated death. Perioperative nursing involves an environment rich in "trigger" factors that can precipitate a crisis event.



# **Model of Care for a Multibed Bay Post Anaesthetic Recovery Unit in a New Major South Australian hospital**

**Louise Mcguire<sup>1</sup>**

<sup>1</sup>Royal Adelaide Hospital, Adelaide, South Australia, Australia

## ***Purpose of Project***

A new major metropolitan hospital has been designed with 180 Perioperative beds (PARU/PACU) with 4-6 bedded bays. All surgical and interventional procedural patients; day patient, inpatient and emergency patients will be cared for in this space. However, no published research exists on the appropriate model of care relating to multiple bed PARU bays, as Australian College of Operating Nurse Standards are for an 'open room where all patients can be seen at all times'.

## ***Research Aim and Question/Hypothesis Methodology***

The aims of the project are to garner expert opinion regarding the best model of care for multiple bed recovery bays to ensure patient centred care and patient safety, and to create a positive, efficient and supported work environment for staff.

## ***Conceptual Model, Research Design, Sample***

Delphi methodology is being used as there is no definitive and published research on the topic. Surveys have been sent to over 100 international perioperative nurse experts over two cycles to gain opinions and consensus.

## ***Results Discussion / Conclusion***

The results from the first round involving 76 respondents internationally has identified key suggestions regarding problems, solutions and benefits for patients, family, staff and the organisation with the new design. The second round consensus data will be completed and findings shared at the ICPAN conference.

## ***Limitations of Study:***

Only two cycles of the Delphi methodology was possible due to time constraints.

## ***Implications for perianaesthesia nurses and future research***

This research will assist in the development of a model of care for Post Anaesthetic Recovery Units worldwide as architects purport interest in this design is increasing. In addition, this research will enable experts in the field to share their knowledge and opinion of how best to ensure patient safety and patient centred care continues to be the focus of all PARU/PACU departments regardless of design.

# **Obstructive Sleep Apnea: Implementation of a Safe Protocol for Perioperative Patients**

**Judy Moreno<sup>1</sup> and Lori Story<sup>1</sup>**

<sup>1</sup>El Camino Hospital, Mountain View, California, USA

Obstructive sleep apnea (OSA) is the repetitive partial or complete upper airway obstruction with periods of apnea. Surgical patients with OSA can have increased complications during the immediate postoperative period including airway collapse, hypoventilation, hypoxemia, hypercarbia, and respiratory depression often after opioid-analgesic administration making vigilant monitoring in the post-anesthesia care unit (PACU) essential. Regulatory advisory prompted an organizational review that demonstrated the need for an OSA screening and identification process, as well as improved patient/family education. Literature review revealed lack of specific evidence based guidelines for patient management and advocacy for patient safety.

The purpose of this project was to guide a best practice implementation of an appropriate clinical protocol to screen and manage patients at risk for OSA in the perioperative setting prior to surgery. Patient population was defined as all adult patients undergoing general anesthesia or procedural sedation. A nursing led protocol was developed to guide the clinical assessment, monitoring, and interventions for at risk patients in multiple phases of care.

In preparation to achieve this practice augmentation of monitoring, appropriate positive pressure equipment and capnography modules were reviewed and acquired. Clarification and improvement of existing policies for home CPAP equipment lead to improved equipment safety and infection prevention. OSA implementation began with the adoption of a validated screening tool and process upon admission. The protocol was developed for safe patient management through all phases of care.

Data review one year post implementation demonstrated that of the total 9,715 patients screened, 49% were positive for OSA risk. Notably Impact Patients during this time period was consistently at 3.8%. This quality improvement project validated the volume of patient risk and areas that needed consistent guidelines to improve OSA care.

Advocacy for patient safety requires perianesthesia nurses to go beyond OSA risk screening and incorporate protocols for safe patient management throughout the perioperative setting and the continuum of care. Our next steps will be expansion of the protocol to include immediate home sleep study upon discharge to facilitate and improve follow up.

Evidence based research validates the prevalence of obstructive sleep apnea and the significant risk associated with anesthesia and sedation. In order to address the critical needs of these patients, peri-anesthesia care settings should be equipped with standardized screening processes to identify at risk patients, adequate training of staff, upgrades for advanced monitoring, and standardized protocol and orders.

# Linking Patient Safety to Clinical Practice: The Insight of New Graduate Registered Nurses

**Melanie Murray<sup>1</sup>**

<sup>1</sup>Edith Cowan University, Perth, Western Australia, Australia

## ***Purpose***

To explore patient safety knowledge for New Graduate Registered Nurses (NGRN).

## ***Research Aim and Question***

The aim of this research is to explore the patient safety knowledge of NGRNs as it applies to clinical practice. The research question being: "What do NGRNs know about patient safety? Are learned skills being translated to clinical practice?"

## ***Conceptual Model, research design, sample***

This PhD project is being conducted with participants who answer a questionnaire concerning medical error recognition, reporting and patient safety awareness three times during their graduate program at orientation, 3, and 6 months to assess their level of knowledge. Interviews will be conducted with NGRNs after 6 months to gain further insight into their safety awareness and translation of knowledge to clinical practice. Benner's Model of Skill Acquisition (1984) and Duchscher's Transition Stages model (2008) has been applied to assess their levels of safety knowledge relative to the transition from novice to advanced beginner in the context of their clinical practice.

## ***Results Discussion/Conclusion***

Patient safety has been a priority from the time damning reports about safety in healthcare made headlines in the 1990's. Quality and safety is currently included in undergraduate educational curricula; however, the impact of this education is unknown. Insights into the quality and safety knowledge of NGRNs will be reported.

## ***Limitations of Study***

The study is being conducted at two sites in the WA metropolitan area, limiting generalisation.

## ***Implications for perianaesthesia nurses and future research***

Errors in the perioperative environment can be catastrophic. Having an understanding of NGRNs knowledge of patient safety practices and procedures will assist perianaesthesia nurses in pitching orientation and education of NGRNs at the right level for the safest patient outcomes.

# **Anesthetic Nursing: Keep in Touch, Watch Over, and Be One Step Ahead**

**Professor Ulrica Nilsson<sup>1</sup>**

<sup>1</sup>School of Health Sciences, Faculty of Medicine and Health, Örebro University, Örebro, Sweden

A nurse anesthetist independently induces, maintains, and carries out general anesthesia under supervision from the anesthesiologist, in contrast to an anesthetic nurse who does not administer anesthesia or take sole responsibility for the anesthetized patient. As instructors responsible for the nurse anesthetist education at our university, and as researchers, we identified the need of such a definition. Although nurse anesthetist is the oldest recognized nursing specialty, it is hard to find any definitions of anesthetic nursing. Based on our experience as nurse anesthetists; project leaders for a national document, “Description of Competence for the Registered Nurse with Graduate Diploma in Specialist Nursing—Anaesthesia Care”; teachers; and researchers in anesthesia and anesthetic nursing, as well as based on research about nursing in anesthesia practice, we have tried to define what anesthetic nursing is.

Three attributes were identified that characterize anesthetic nursing: (i) keeping in touch with the patient, (ii) watching over the patient, and (iii) being one step ahead. By keeping in touch, watching over, and being one step ahead, the nurse anesthetist can ensure a safe passage of the patient through the anesthesia, support the patient’s vital functions and emotional and physical needs, protect the patient and prevent harm and suffering, and respect the patient’s integrity and dignity, that is—anesthetic nursing.

# **The Autonomic Nervous System: Fine-Tuning Physiology with Pharmacology**

**Dr Kim Noble<sup>1</sup>**

<sup>1</sup>Widener University, Ambler, Pennsylvania, USA

The Autonomic Nervous System provides integrated physiologic regulation, resulting in an exact match of cardiovascular performance to metabolic requirements. ANS function is a frequent focus for pharmacologic manipulation in patients with pre-existing cardiovascular disease. The administration of anesthetic agents may impact cardiovascular function and result in the compensatory activation of the ANS. The combination of pre-existing cardiovascular disease and pharmacologic management with the administration of anesthesia can create significant challenges for the emerging perianesthesia patient. A holistic understanding of ANS function and pharmacologic interactions is essential for the perianesthesia nurse to anticipate, rapidly identify and manage in the prevention of postoperative complications. This presentation will begin with a review of ANS structure and function. Common pharmacologic foci in cardiovascular disease management will be provided, including mechanism of action and physiologic implications. This content will be applied to the nursing assessment and management strategies in the care of the perianesthesia patient emerging from anesthesia.

Participation in this presentation will foster an understanding of ANS function and pharmacologic manipulation which can be applied to the bedside care of the perioperative patient.

Life-long learning for the perianesthesia nurse includes revisiting physiologic and pharmacologic principles and their implications to promote safe patient care with the anticipation and rapid management of drug interactions.

Improved understanding of the pharmacologic manipulation of ANS function can inform safe patient care in the perianesthesia setting.

# What Do I Say? Standardizing Postoperative Follow Up Phone Calls

**Dr Denise O'Brien<sup>1</sup>**

<sup>1</sup>Michigan Medicine - University of Michigan, Ann Arbor, Michigan, USA

Patients undergoing outpatient surgery and procedures are telephoned the next working day to solicit feedback and offer education and support to the patient and family. Questions arise related to common complaints associated with the procedure and anesthesia. Several nurses with varying experience make these calls at 5 different sites in the health system. These nurses needed a guideline and algorithm to help structure their responses to these common concerns and ensure patient follow up and safe care. This guideline and algorithm provide the nurses with standardized responses to common complaints and encourage consistent follow up when challenges arise for patients, families and caregivers.

Following development, the draft document was shared with PACU nursing leadership. The document was then submitted to the Department of Anesthesiology Clinical Practice Committee (CNS is a member) for review and comment. PACU nurses from each site reviewed the document and commented. Following revision of the draft document, the guideline and algorithm will be shared with the Operating Room Oversight Committee and Perioperative Services Quality Improvement Committee. Electronic health record documentation of the postoperative follow up telephone call will be revised to reflect the content of the guideline and algorithm for ease of documentation and auditing of patient outcomes.

The description of the process used to improve and standardize responses to patients, families, and caregivers during the postoperative follow up telephone call will help other practicing perianesthesia nurses evaluate their postoperative follow up telephone call content and responses and possibly modify those processes to improve patient outcomes and satisfaction following outpatient surgery and procedures.

Providing the perianesthesia nurse with a structured, scripted response to common postoperative complaints will facilitate consistent communication with patients, families, and caregivers and improve communication with anesthesia and surgical providers when potentially adverse or less than satisfactory outcomes occur after the patient has returned home.

# **Peri-anaesthesia Care for Insulin Dependent Diabetics and Hypoglycaemia/Hyperglycaemia Management**

**Mary Otten<sup>1</sup> and Abby Hess<sup>1</sup>**

<sup>1</sup>Cincinnati Children's Hospital, Cincinnati, Ohio, USA

Patients who have the diagnosis of Insulin Dependent Diabetes Mellitus (IDDM) have special needs when coming through the peri-anaesthesia area. They are a low volume but high risk group of patients with their blood glucose levels impacted by stress and fasting for their procedures. Whenever patients present with hypoglycaemia or hyperglycaemia in the peri-anaesthesia area, quick and effective management is necessary for patient safety. The development of standardized guidelines and order sets can prevent issues with glycaemic control as well as enable optimal management for hypoglycaemic or hyperglycaemic events when they occur. Our multidisciplinary team implemented an IDDM guideline algorithm in 2012, leading to improvements for the safe care of our patients, as well as staff satisfaction with a process that spells out a detailed plan for these patients.

By mapping the diabetic care issues throughout the peri-anaesthesia area, our team developed an evidence based algorithm guideline for care with associated computerized order sets by 2012. The core principles include: identify the patients, initiate pre-planning with the families, comprehensive orders for labs, medications and IV fluid management, endocrine consults, and guidelines to delay or cancel the case.

Quick and effective management of hypoglycaemic and hyperglycaemic events is necessary for the safe care of these higher risk peri-anaesthesia patients. Individualization of care becomes an issue when different team members address these events with multiple plans. It was important to get the consensus of the multidisciplinary team for a single evidence based algorithm approach for management and gain the support from all of the peri-anaesthesia staff to provide this improvement in care for our IDDM patients.

Our IDDM algorithm guidelines and associated orders have stood up over the years to manage the ever-changing medications, techniques and technology that continue to develop for the management of these patients. We would like to share our successful process to illustrate how this innovative practice improvement can be duplicated in other locations.

# **Ceasing the Routine Commencement of Oxygen Therapy in a Recovery Unit**

**Julie Preston<sup>1</sup>**

<sup>1</sup>Austin Health, Doncaster, Victoria, Australia

It can be very difficult to change nursing practice. In this case, patients admitted to the recovery unit would routinely be administered supplemental oxygen therapy regardless of the patients SaO<sub>2</sub>. However, there is an increasing body of evidence that this routine commencement is not recommended and in some cases may be harmful.

Nursing staff conducted in-service education and sent email notifications to nurses working in the recovery unit and anaesthetists at the hospital regarding the rationale for ceasing the routine commencement of oxygen therapy. Instead, oxygen therapy was to be commence when a patient's oxygen saturation was persistently below Urgent Clinical Review (UCR) criteria (SaO<sub>2</sub> < 94%).

A simply designed multidisciplinary education program prevented every patient in the recovery room from receiving supplemental oxygen. Now, oxygen is administered according to evidence-based criteria.



## **A Journey into the Operating Room**

**Sonia Reyes<sup>1</sup>**

<sup>1</sup>Austin Health, Melbourne, Victoria, Australia

In 2014 the recovery nurses of the Austin Health one of the teaching hospital in Melbourne, as part of the Standard 2 Partnering with Consumers, did a patient satisfaction survey of the Parent/Guardian of paediatric patient.

The parents and guardians who answered the survey mentioned suggestions one of them, was how to find their way back to the recovery room. So we decided to make a video which would demonstrate the process in the Operating Suite and to see a real operating room and how the staff is involved with the patients.

It was decided that the video would be a narrative video with English subtitles, also the video help patients with the hearing impaired and those who their English is the second language.

Once the script was finished, for quality control purposes the script was randomly viewed by patients who had gone through the same experience, they said the script was a clear reflection of what they had experienced.

When the video was filmed, the real staff of the operating suite of Austin played most of the roles, except for the paediatric patients. The journey into the operating room was edited, there are 2 videos both are 4 minutes long, the video show specific clues like wall signs, the lifts, and how to go to the Recovery room.

To evaluate if the video has achieved its objective, “to reduce the stress level of the unknown”, the preadmission anaesthetic clinic was involved, the nurses showed the video to patients in the clinic that had never being into the operating room, a few days after the surgery a recovery nurse followed up with the patient and surveyed them. The video has improved the care by reducing patient stress. The stress level could have a negative impact in the patients’ health.

# **The Impact of Anxiety on Anaesthesia: Evidence-Based Strategies to Allay Our Patients' Concerns**

**Dr Heather Reynolds<sup>1,2</sup>**

<sup>1</sup>Royal Brisbane and Women's Hospital/The University of Queensland, Brisbane, Queensland, Australia

<sup>2</sup>Alliance for Vascular Access Researching and Teaching (AVATAR), Griffith University, Brisbane, Queensland, Australia

## ***Introduction***

Over the last 200 years the nature of the surgical patient's experience has changed dramatically. Patients were incapacitated and remained in hospital for extended periods, and care focused on the activities of daily living (Roper, 1980). Patients now often are admitted for surgery on the day of their procedure. This short time frame between admission and theatre creates a situation of heightened anxiety for many patients.

## ***Objectives***

- To explain research about patient anxiety and the surgical experience.
- To provide evidence-based strategies to minimise patient anxiety.
- To recommend directions for further research about patient anxiety.

## ***Methods***

An overview of the literature reviewing selected studies about patient anxiety.

## ***Results***

Studies consistently report patient anxiety prior to elective day surgery. Aspects of the surgical experience which are reported by patients as contributing to their anxiety prior to surgery include waiting in an unfamiliar environment, inadequate understanding of the surgery, dealing with unknown personnel, and limited time to adjust to the situation. Specific aspects of care which were of the greatest concern were the thought of dying, not waking up, waking up during the operation, needing to trust strangers and having injections. Evidence supports an association between increased perioperative anxiety and adverse outcomes, as well as greater anaesthetic requirements.

## ***Conclusions***

Strategies to allay patient anxiety include being visited by the anaesthetist prior to going to theatre including an explanation of the anaesthetic, being able to read information about the operation, having a relative or friend accompany the patient while they wait, and to wait in a modern environment. Patient-centred, helpful information needs to be provided with a kind approach and delivered with optimal interpersonal skills.

# **The Effect of Non-Pharmacologic Distraction Forms in Reducing Postoperative Pain in Children**

**Charlotte Rosenkilde<sup>1</sup>**

<sup>1</sup>Odense University Hospital, Odense C, Denmark

## **Purpose**

The purpose was to explore childrens' perception of pain on five different non-pharmacological interventions as a complementary treatment for postoperative pain.

## **Method**

A non-matched case-control study was conducted including 240 children age two to seven. 40 children were consecutively included in a control group and five intervention groups: music designed for adults and children, reading aloud, watching children's cartoons and a film based on nature sceneries with therapeutic music. Childrens' perception of pain was assessed using the Facial Affective Scale (FAS) recorded upon arrival at the postanesthetic care unit (PACU) and at intervals of 15 minutes during the postoperative period.

## **Results**

Upon arrival at PACU until the 30 minute interval, the FAS score was between 2.2 - 3.5 in four of the intervention groups and between 2.0 - 2.2 in the control group. After the 30 minutes interval a decrease in FAS score was seen in the four interventions and even lower than the control group FAS score.

FAS score in the intervention group film based on nature sceneries with therapeutic music was significantly lower ( $p < 0.01$ ) than the control group and the other intervention groups throughout the whole postoperative period.

## **Limitations of Study**

The case-control design provides limitations to identify comparable interventions groups, why it is perceived as a non-matched case-control study. It is also to be emphasized that the findings were based on a limited study population and therefore should be interpreted with caution. The study was performed at a single university hospital with inclusion of children after lower abdominal and genital surgery, which may limit the generalizability of our results.

## **Implications for practice**

The vision was to improve the quality of the postoperative treatment of young children by implementing alternative interventions based on the child's assessment of pain.

## **A Foundation of Learning – The Mentor**

**Jenny Sutton<sup>1</sup>**

<sup>1</sup>Calvary Mater Newcastle, Metford, New South Wales, Australia

For many years perianesthesia nurses have learnt through the old adage of “see one, do one, teach one”. I remember this was how I was taught many years ago when I began my perioperative career. However, with the increasing consumer and professional demand for more formalised learning and the continuing professional development of graduate nurses and transition to perianesthesia nursing programs the role of the mentor for these learners may be considered more relevant than ever.

It can be argued that the professional skills demonstrated by perianaesthesia nurses are very different to other nursing disciplines and the knowledge of the perianesthesia role is specific to this professional practice. Therefore, it may be concluded that with the aging nursing workforce and increasing number of health care consumers, that perianaesthesia nurses must consider the unique role of the perianaesthesia learner and how the profession mentor’s novice practitioners.

This presentation would examine the role of the mentor, the hindrances to effective learning and mentoring and how the perianaesthesia mentor can promote and encourage a positive, effective and empathetic learning environment that enhances the learner’s experiences and patient centered care.

The discussion supporting the important role of the mentor would encourage awareness towards the role of a perianesthesia mentor, whilst promoting insight into the experiences of the learner and the influence each mentor has upon the individual learner and the perianaesthesia profession.

# **In Retrospect – Peri-Anesthesia Nursing Practice in The Philippines: Onwards to a Model and Standards**

**Dr Paul Michael S. Tan<sup>1</sup>**

<sup>1</sup>St. Luke's Medical Center, Tacuig City, Metro Manila, Philippines

## ***Introduction***

The Peri-Anesthesia period begins when the patient is informed about procedure until recovery and continues until the patient resumes his or her usual activities.

## ***Identification of the problem***

At present, there were Peri-Anesthesia Standards present in other countries however; there were no existing model and standards for Peri-Anesthesia Nursing in the Philippines.

## ***Purpose of the Study***

The overall aim of this study is to describe the Filipino Peri-Anesthesia Nursing (PAN) practices from different perspectives then create a Model and Standards that would be applicable in the Philippines.

## ***Methodology***

This study utilized Mixed Qualitative-Quantitative research approaches in 3 sequential phases. The First phase was performed using Retrospective Document Analysis, In-depth Interview, and Integrative Literature Review to describe Filipino PAN practices. The Second phase was Model and Standards Development. The Third phase was executed using t-Test, ANOVA, and Scheffé Method to evaluate the proposed P.A.N. Standards as to Relevance, Clarity, and Acceptability. Purposive Sampling technique was used in identifying staff nurses, nurse-leaders, and anesthesiologists as respondents (n=197). The research tools underwent Expert Validation and Reliability test showed good remarks ( $\alpha=0.85$ ) using Cronbach Alpha.

## ***Results***

After triangulation, clustered themes resulted from Qualitative Approaches as follows: Nursing Process, Ethico-Legal Responsibilities, Communication and Collaboration, Research and Quality Improvement, Education and Training, Environment of Care, and Leadership-Management. The themes have enlightened the development of "P.A.N. Rocket Model" and the concepts were used in formulating "7 Standards for Peri-Anesthesia Nursing". In Quantitative approaches, results showed that respondents viewed the Standards to be Highly Relevant ( $x=3.76$ ), Very Clear ( $x=3.62$ ), and Highly Acceptable ( $x=3.60$ ). Variations as to Relevance were noted between staff nurses and anesthesiologists (Sig.=0.017), while other parameters showed no significant differences.

## ***Discussion***

Significant differences rooted from the variety of perceptions of nurses and anesthesiologists because of the different educational and clinical background of the respondents. But despite these differences, the respondents viewed that contents of the standards were relevant, clear, and acceptable for Peri-Anesthesia Nursing Practice.

## ***Conclusion***

The PAN Rocket Model and 7 Standards will serve as guide for Peri-Anesthesia Nurses working in the Philippines in performing safe and quality care.

## ***Implications for perianesthesia nurses and future research***

The results can be used for the advancement of Filipino Nursing Profession.

# **Climbing PICOT Mountain: Enhancing Nursing Inquiry at the Bedside**

**Cidalia Vital<sup>1</sup> and Meg Betune<sup>1</sup>**

<sup>1</sup>Baystate Medical Center, Springfield, Massachusetts, USA

In an effort to build interest in nursing research, a program was created to cultivate nurses' clinical curiosity. The Nursing Inquiry Committee (NIC) was established to nurture and support an environment for nurses to question clinical practice issues. The committee created an interactive educational tool using SurveyMonkey® to teach nurses the seven foundational steps of evidence-based practice (EBP) and the process of constructing a clinical question using PICOT (Population, Intervention, Comparison, Outcome and Timeline) format. The nursing staff was asked to submit clinical questions on a poster and present their work at the Clinical Inquiry Campaign (CIC). NIC became mentors to participants and provided individualized education and support. The NIC judged the submissions using a standardized rubric. Winning teams were given a monetary award to help them pursue their PICOT questions.

Of the 160 clinical questions submitted, two received Institutional Board Review (IRB) approval and are complete. Thirty-five questions are at varying stages of the Life Cycle and have been determined to be quality improvement or evidence-based practice projects. One PICOT question that was submitted resulted in a large-scale system-wide improvement. These programs have demonstrated that cultivating a spirit of clinical inquiry increases staff engagement, leadership support, and ultimately an interest in evidence-based practice and research.

The winners of the first annual Clinical Inquiry Campaign were four staff nurse from the perianesthesia department. As winners they began to answer their clinical question and were mentored and trained on the IRB and the research process. Their research question was "In Adult day stay patients undergoing GYN surgery with general anesthesia, does the implementation of a modified NPO status, compared with the current practice, decrease post-operative nausea/vomiting?" They were able to present their finished research project using the Life Cycle of a Butterfly theme at the 3<sup>rd</sup> CIC. They have subsequently presented their findings at the National ASPAN.

## **Abstracts for Poster Presentations (alphabetical by presenter surname)**

### **Creating a Tide of Change by Engaging Staff in Continuous Improvement**

**Lila Berry Martin<sup>1</sup>**

<sup>1</sup>The University of Kansas Health System, Kansas City, Kansas, USA

There is a growing demand for healthcare as patients live longer with chronic conditions; baby boomers age and technology improves. Most healthcare facilities have limited resources, both people and capital, to increase capacity of facilities including operating rooms, preoperative and post-operative care areas. Facilities are looking to improve efficiency to meet demand. The University of Kansas Hospital, was one of these facilities.

The growing demand for surgical services necessitated major change. The hospital chose to utilize the processes and tools of the Toyota Production System (Lean), to generate a cultural transformation to impact and sustain the desired changes needed in healthcare today.

Viewing processes through the eyes of the patient allowed staff to see waste, in the form of waiting, redundancy, over processing and inventory. Using the Lean tools, staff are engaged in finding and trialling solutions to improve efficiency and decrease waste. Staff engagement in the process is key to sustaining the need changes.

Patient flow the day of surgery was mapped and a future state envisioned. Through a series of workshops, various processes were analysed and counter measures instituted. Once a measure was determined to be successful, it was audited for 90 days to ensure effectiveness. Metrics are monitored daily or weekly and reported to leadership through weekly meetings. Barriers and challenges are reviewed and escalated to the Executive team on a regular basis.

Each unit conducts a daily huddle to review current metrics, progress and suggest additional areas of improvement.

There are many improvement methodologies facilities can use to improve efficiency and outcomes. The Toyota Management System, also known as Lean, is gaining attention in healthcare. Hear how one facility is using this methodology to improve perioperative efficiency and change the culture to one of continuous improvement.

Using the Lean tools we have decreased pre-op preparation time by eliminating waste and redundancy; created standard work for all disciplines; adjusted patient arrival times to the facility. This has decreased waiting for patients and staff, and increased satisfaction.

# Attacking Surgical Site Infections One Bug at a Time

**Dr Joni Brady<sup>1</sup>**

<sup>1</sup>Perianesthesia Nursing Consultant, Alexandria, Virginia, USA

## ***Introduction***

In 2016, approximately 16 patients per month arrived in the pre-anesthesia unit on the day of surgery (DOS) with a documented history of Methicillin Resistant Staphylococcus Aureus (MRSA). All patients identified as having a positive MRSA history but without a documented preoperative surveillance culture required contact isolation in all phases of care until negative culture status was confirmed by an infection preventionist. Contact isolation and surgical site infection prevention education was conducted on DOS with the patient and family. Because patients with active MRSA colonization require contact isolation and have a greater risk for developing surgical site infections, our goal was to initiate early preoperative surveillance and decolonization to de-isolate prior to DOS.

## ***Methods***

A clinical decision map was developed from an evidence-based literature review. A letter containing best practice treatment options was designed to inform the admitting surgeon prior to DOS when a patient was identified as having a history of MRSA. The proposed process for screening, treatment and removal of patients from MRSA positive status prior to DOS was presented to surgeons, anesthesia, and an infectious disease physician with interdisciplinary consensus achieved. Education for the new process was disseminated to all perioperative practitioners to promote understanding and adherence to the MRSA patient management protocol.

## ***Intervention***

Pre-Surgical Services (PSS) nurses query the patient about MRSA history during the pre-anesthesia interview and review the electronic record to assess documented infection history. When patient identified as MRSA positive, a PSS surgeon notification letter is transmitted to promote early intervention. A PSS nurse educates the patient about MRSA, documents all preoperative interventions in the electronic record, and notifies the infection prevention nurse who makes the final decision on contact isolation status. On DOS, contact isolation is observed in the absence of negative culture reports.

## ***Outcomes***

A retrospective review was conducted from January to September 2017: 194 designated preoperative isolation patients were identified, 95 of whom were MRSA positive requiring contact isolation. Of those 95 patients, 12 were re-cultured per protocol and removed from isolation prior to the DOS. An additional 6 patients were removed from contact isolation status after a second set of negative cultures was documented during their surgical recovery.

## ***Implications for Practice***

Implementation of an evidence-based clinical decision map together with early surgeon communication and consistent perioperative documentation of MRSA surveillance and treatment may result in less patients requiring contact isolation on DOS.



# Current Management of Peri-Procedural Anticoagulation Reversal

**Ina Cherapaha-Kantorovich<sup>1</sup>**

<sup>1</sup>University Health Network, Toronto, Ontario, Canada

Management of peri-procedural anticoagulation reversal is a common clinical problem requiring expert assessment of the patient's thromboembolic risk and procedure related bleeding risks. The patient's thromboembolic risk and type of anticoagulant therapy determines the optimal strategy to minimize time off anticoagulants. The procedural bleed risk must be considered to determine the duration of interruption of anticoagulation therapy and when it is safe to resume full anticoagulation. Anticoagulation may be continued in patients undergoing selected minor procedures. For major procedures necessitating anticoagulation interruption, low molecular weight heparin or direct oral anticoagulant bridging therapy should be considered for patients with a high thromboembolic risk. Reversal of the direct oral anticoagulants, such as dabigatran, rivaroxaban, and apixaban, is simplified by the relatively short half-life, rapid onset of action, and predictable pharmacokinetics of these agents. A practical, patient-focused approach to peri-procedural anticoagulant management will be presented.

## **CROPS- Collaboration and Resource Optimization of Preadmission Services**

**Janice Chew<sup>1</sup>**

<sup>1</sup>Westmead Hospital, Sydney, New South Wales, Australia

Patients were experiencing longer than recommended NSW policy guidelines for waiting for their clinic appointment. This resulted in patient dissatisfaction, patient leaving without completing their appointment and needing to return at a later date. Patient would not attend their appointments resulting in financial loss for the department. When investigating the wait times it was found that patients were waiting for correspondence from other medical specialists to clear the patient to be fit for surgery, or a plan for anticoagulation bridging therapy. Incidental findings such as unnecessary preoperative testing were also discovered. Patients that are not properly optimise prior to day surgery may result in cancellation. A day of surgery cancellation results in an operating theatre being empty at a cost of \$150 per minute. Westmead hospital is also in the process of redevelopment and it is timely to review process for new service provision.

A number of steps were taken such as identifying issues, to brainstorming workshops for solutions, and weighted voting resulting in the identification of over 108 solutions. This was refined down to 14 solutions for implementation. Not all 14 solutions were possible to achieve in the time frame and some were to begin in 2017.

Some solutions for 2016 include:

1. Pilot program for second screening nurse. Resulting in more appropriate utilisation of PAC appointments and improved working conditions for current screening nurse. Positive feedback from Bookings.
2. Patient Passports implemented successfully with improvement in patients' understanding of the PAC process, increased satisfaction and reduction of self-discharge. Patient satisfaction rates - 94%.
3. Collaboration with surgeons to update surgical protocols. 15 out of 16 subspecialties completed. Resulting in improved flow through PAC, decrease in waiting time for patients.
4. Collaboration with surgeons to provide preoperative anticoagulation plans. Result - 82% of patients now have documented plans compared with 22% originally.
5. Infotainment Video outlining the admission process for patient. Completed and now being translated into several languages. The infotainment video has become a one hour loop and will be available on social media.
6. Increased clerical support has led to better patient flow, freeing up of nursing staff to do clinical work.
7. SMS reminders aimed at reducing number of DNAs. DNAs decreased by 4 per month.
8. New Equipment and Room repurposing being successfully utilized by clinic staff.
9. New guidelines for acceptance of RFAs with PHQ completion rates rising from 23% to 65%.
10. Separate clinic for obstetric patients with midwives linked in to optimise patient flow and reduce number of hospital visits. Pilot clinics began in December 2016

The Preadmission clinic is a “one stop shop” for patients to be optimised prior to surgery. The innovative practice is meant to streamline and enhance patient care through education and preparation for patients.

## **POUR treatment - Less is more**

**Lene Doktor<sup>1</sup>**

<sup>1</sup>Rigshospitalet, Copenhagen, Virum, Denmark

Postoperative Urinary Retention, defined as the inability of voluntary micturition despite a full bladder, is a well-known risk factor of anaesthesia and surgery. Previous guidelines in the practice setting led to a relatively high amount of patients being subject to intermittent catheterisation with well-known complication risks, such as urinary tract infections and voiding difficulties. A research study hypothesis brought forth suggested a higher guideline threshold could be implemented without causing significant if any disadvantages. Intermittent catheterisation is invasive to the patient and resource consuming for the care unit, why avoiding unnecessary intermittent catheterisations will enhance over-all patient comfort levels.

Threshold guidelines, of scanned bladder volume for executing intermittent catheterisation, were changed from 400 to 800 ml, which led to a significant reduction in patients who were subjected to intermittent catheterisation.

Reducing invasive intermittent catheterisation by increasing bladder volume threshold.

Impact should expectedly be three-fold:

- reduced need for performing intermittent catheterisation
- increased comfort for patients not being unnecessarily subjected to invasive procedures
- reduced risk of urological complications

# **The Effect of Helmet CPAP Continuous Versus Intermittent CPAP Mask After Major Abdominal Surgery**

**Lene Doktor<sup>1</sup>**

<sup>1</sup>Rigshospitalet, Copenhagen, Virum, Denmark

## ***Background***

Postoperative respiratory failure is a frequent complication after major abdominal surgery. The incidence of pulmonary complications is 22.5%. Compared to other operations like orthopedic, abdominal surgery is associated with increased risk of Postoperative Pulmonary Complications (PPC). There are made several retrospective studies, where independent patient-related and procedure-related factors have been identified.

Due to the frequency and severity of pulmonary complications, there has been researched intensively in the treatment and prevention of these. There is evidence that prophylactic routine use of postoperative CPAP (Continuous Positive Airway Pressure) reduces the incidence of PPC and in some studies, reduces the time at the hospital. (LOS - Length of stay).

A review of the literature shows that apparently there would be an advantage, using continuous CPAP to patients as PPC prophylaxis instead of intermittent use.

At Copenhagen University Hospitals Postoperative Therapy Section (PACU) a part of the standard treatment for "24hour-patients" is start of prophylactic intermittent CPAP with a mask 10 minutes every 2 hours the first postoperative day. "24hour-patients" are characterized by patients undergoing major abdominal surgery with an increased need for supervision and monitoring, which are causing them to spend the night at the PACU.

There is no clear understanding of how, how often or how long CPAP should be given to achieve best results.

## ***Purpose / Aim of study***

With this study we wish to compare the effect on postoperative pulmonary complications using either intermittent CPAP mask (control) or continuous CPAP Helmet (intervention), but at the same time find out which treatment is tolerated better by the patient.

## ***Method***

The project is carried out as a randomized controlled clinical trial with blinded outcome assessment. It is measured on postoperative complications, specific pulmonary complications, oxygen uptake in the body, as well as compliance and patient experience of respectively intermittent CPAP with mask and continuous CPAP with helmet.

There is used computer generated randomization to either intermittent or continuous CPAP. Randomization has been done after the patient has given written consent to participate in the trial, and upon arrival at the PACU after surgery.

## ***Results***

Data is currently undergoing analysis and will be ready for presentation at ICPAN 2017.

# **Simulation increases confidence of physicians and nurses in handling pediatric trauma**

**Anna Gissler<sup>1</sup>**

<sup>1</sup>Astrid Lindgrens Childrens Hospital, Karolinska University Hospital, Hagersten, Stockholm, Sweden

## ***Background and aims***

Due to the low number of pediatric trauma cases (2015: 32 of 329 patients NISS >15), we believe that theoretical introduction and practical training in pediatric trauma care will increase the confidence within the trauma team.

## ***Method***

21 nurses ( anaesthetic and scrub nurses) and 24 doctors (surgeons, emergency physicians and anaesthetists) were able to answer a number of questions on a validated self-assessment form.

## ***Results***

45 questionnaires were distributed. 39 participants reported increased or significantly increased confidence completing the course. 2 doctors reported no difference. 4 participants did not submit the questionnaire.

## ***Conclusion***

Our findings shows that after theoretical introduction and practical training in pediatric trauma care there was an increased or significantly increased confidence in most of the trauma team except from a few doctors.

# **Patient Involvement in the Drafting of Information Material to Optimise Treatment of Patients Undergoing Cardiac Surgery; A Questionnaire Study**

**Lone Hedegaard Andersen<sup>1</sup>**

<sup>1</sup>Aarhus Universitets Hospital, Østbirk, Denmark

New operating methods, shorter stay in ICU and a due update of our existing patient information made us engage in the process. Into account came also Denmark's 8 new National Health Goals – one of them being increase patient involvement - and our idea to make it comprehensive yet not overwhelming.

We discussed at length what information we as nurses wanted to include and bearing in mind that patients are cognitive impaired post anaesthetic, we still found the idea of asking the patients and maybe also their relatives could be very valuable for the quality of the information material.

Also discussions about sending it electronically or by mail were not conclusive. A large part of our patients is older and maybe not so used to IT as younger people, but on the other hand, Denmark's older population are some of the most IT literate in the world. Therefor we added questions about how they want the information.

After receiving the questionnaires, we analysed the data, categorized data and listed the outcome. We were surprised to learn, that a vast majority wanted information electronically and also wanted to access the information on the internet. The kind of information the patients needed was not such a great surprise, but guided us in our further work.

The whole process grew, involving the surgical ward, surgeons, physiotherapists, orderlies and operating theatre staff. We used the department of communication staff and came up with a web app, explaining the whole pathway from admission to discharge. To be found in Danish at [www.hjerteop.auh.dk](http://www.hjerteop.auh.dk). It is a written patient information with lots of pictures and videoclips We are still working on making it complete, so that you can click on the relevant surgery and the relevant recovery.

Ahead lies so much more work i.e. structured feedback from patients and relatives, revision, securing up to date information from all units involved.

It is absolutely possible to involve patients in creating useful and relevant patient information material.

We believe, that in working together all nurses in the peri anaesthetic setting, we achieve an effective use of resources, clearer patient pathway (for both nurses, patients and relatives) and well-prepared patients when the patients have been involved in drafting the information material.

# Testing the Reliability and Validity of the Child Induction Behavioural Assessment (CIBA) Tool

**Abby Hess<sup>1</sup>**

<sup>1</sup>Cincinnati Children's Hospital, Cincinnati Children's Hospital, Ohio, USA

## ***Purpose of Project***

Research has consistently demonstrated that negative induction experiences are associated with undesirable post-operative outcomes in paediatric patients, such as emergence delirium, increased pain, sleep disturbances, separation anxiety and phobias. Previously, behavioural responses to induction were rarely documented because there was not a standardized tool to facilitate quick documentation. Our hospital developed and implemented the CIBA tool to promote electronic documentation of behavioural responses to anaesthesia inductions in clinical practice. The implementation of validated clinical practice tools that are also quick to use facilitates meaningful documentation. Clinician feedback on this tool indicated that reviewing a patient's CIBA rating on a prior anaesthesia record can provide useful information for optimizing induction plans for returning patients. Formal testing of validity was indicated to determine the potential value of the CIBA in other settings.

## ***Research Aim and Question/Hypothesis Methodology***

The aims for this study were to determine whether the CIBA tool demonstrates inter-rater reliability and concurrent validity with a more complex validated tool, the Induction Compliance Checklist.

## ***Conceptual Model, Research Design, Sample:***

This study was a prospective, observational study of 650 typically developing children ages 1-13 undergoing inhalational anaesthesia induction.

## ***Results Discussion / Conclusion***

Results from the initial 169 patients recruited support the inter-rater reliability and the validity of the CIBA tool. There was significant agreement between the two trained observers with the anaesthesia provider ratings (who were performing the inductions). Full recruitment is projected to be complete by June of 2017.

## ***Limitations of Study***

The study only recruited typically developing patients from one hospital and there were >60 clinicians involved in the study.

## ***Implications for perianaesthesia nurses and future research***

Optimizing induction experiences is important for the psychological well-being of children, particularly for patients who require repeat anaesthetics. Documenting behavioural responses may help to optimize subsequent induction experiences for individual patients and it can also help to identify populations who could benefit from targeted interventions.

# **PACU Demystified: Revealing Ourselves to Foster Collaboration**

**Andrew Higgins<sup>1</sup>**

<sup>1</sup>Princess Alexandra Hospital, Brisbane, Queensland, Australia

With all of the competing demands of the hospital PACU often gets bed blocked to wards and this can contribute to delays in the Operating Theatres. This in turn led to some “us” v’s “them” mentalities and conflict between departments. We decided to engage with the clinical wards to give them some concept of what our work involved. We wanted them to understand that the PACU was an Acute Care Setting and to have an insight into what exactly our work entails. Ward nurses didn’t know “ what we do. This workshop was originally focussed on that aspect but has since matured to also teach important airway management skills to our ward based colleagues.

The workshop content was developed through a consultation process with the PACU nursing team. The original idea was expanded from initially sharing/observing the PACU experience to teaching clinical ward staff new skills (Acute Pain Management, Airway Skills) useful in their daily practice as well as in crisis management situations.

It was then developed into a one day workshop format with the basic format following this approach: AM – Presentations, Lunch and Simulation exercise –skills into practice, PM – immersion in unit. We have found through our own unit experiences and from the feedback received by the attendees that this is a rewarding exercise for all staff involved.

The workshop is always well subscribed and this has highlighted that there is a demand for this type of program. The concept now has a “lite” spin off version that is given by the PACU Clinical Facilitator to new staff starting in the hospital. All new hospital casual nursing employees are given a one hour presentation at one of their education days.

- Whilst not measurable we hope that we have contributed to improving patient outcomes in the crucial 24hr period post operatively.
- Providing opportunities for ward staff to gain new skills and see what happens immediately post operatively and therefore gain a greater understanding and appreciation of the PACU role.
- Create working relationships/networking between PACU and ward staff. Opportunity for PACU nurses to listen to clinical ward staff, discuss issues relevant to them and have the ability to clarify concerns. It also provides the ability to learn some of the more specialised surgical ward nursing skills.
- Decrease clinical ward staff anxieties about coming to PACU by allowing them into our environment and giving them an understanding of our “language” and practices.
- Enabled PACU staff to give ward staff more relevance and understanding of the PACU Discharge Criteria.
- Decrease levels of perceived harassment and bullying within PACU from co-workers outside of the immediate team. (as per below grab from the PAH Best Practice Australia cultural survey results.)



# **The Effect of Parent Visiting Program in PACU on Delirium Among Pediatric Patients After General Anesthesia**

**Woo Young In<sup>1</sup>**

<sup>1</sup>Yonsei University, Severn Hospital, Seoul, Korea (South)

## ***Purpose of Project***

This study is to evaluate the effect of parental visiting program on the degree of delirium among paediatric patients who had undergone surgery under general anaesthesia.

## ***Research Aim and Question/Hypothesis Methodology***

- 1) In the experimental group where the parent resides in PACU, the delirium scores will be lower after 10 minutes, 20 minutes, and 30 minutes than in the control group.
- 2) The degree of delirium in the experimental group over time will be lower than in the control group.

## ***Conceptual Model, Research Design, Sample:***

- 1) Non-equivalent control group non-synchronized design
- 2) The study participants were 3-6 year - old paediatric patients who underwent tonsillectomy under general anaesthesia. The delirium scores was measured in 46 patients in the experimental group and 47 in the control group at the entrance of PACU, 10 minutes, 20 minutes, and 30 minutes. Data were collected from August 2015 to February 2016.

## ***Results Discussion / Conclusion***

- 1) At all the time points, the delirium scores in the experimental group was lower than the control group, but there was no statistically significant difference.
- 2) The degree of delirium in the experimental group with parent in PACU showed a significant difference with time ( $F = 6.98$ ,  $p = .010$ ).

## ***Limitations of Study***

- 1) It is necessary for paediatric patient that the independent space is needed in PACU to apply parent visiting program.
- 2) Follow - up studies are needed to add delirium period while controlling the pain of the paediatric patient when applying the parent resident program.

## ***Implications for perianaesthesia nurses and future research***

It is suggested to test the effect of parent visiting programs in PACU for childhood delirium in various surgical procedures and in children of various ages.

# **“I’m Not Ill, Just Damaged for the Rest of my Life” - Micturition Problems After Bladder Distension During Hospitalization in Sweden**

**Dr Eva Joelsson-Alm<sup>1</sup>**

<sup>1</sup>Department of Anaesthesia and Intensive Care, Sodersjukhuset, Stockholm, Sweden

## ***Purpose of Project***

Urinary retention is a common complication following surgery, which can result in overdistension of the bladder and leading to chronic bladder damage and persistent micturition difficulties. In many cases this can be classified as an avoidable patient injury. The purpose of the study was to explore patients' experiences of micturition problems after bladder distension and how the injury had effected the patients' everyday lives.

## ***Research Aim and Question/Hypothesis Methodology***

Research question: “How would persons who had experienced bladder distension describe their micturition problems and their effects on everyday life?”.

## ***Conceptual Model, Research Design, Sample***

A qualitative descriptive design was chosen. Interviews with 20 participants were performed. The participants were between 28 and 78 years of age at the time of injury and the most common cause was postoperative urinary retention. Data were analyzed using inductive qualitative content analysis.

## ***Results Discussion / Conclusion***

The micturition problems affected everyday life through constraints (dependence on disposables and access to toilets, clothing restrictions, limitations on social life and career), suffering (pain, infections, impaired sex life, leakage), and concerns for the future (fear of worsening symptoms and fear of losing control with age).

Bladder distension due to postoperative urinary retention is a healthcare-related injury that can cause suffering and practical, emotional, and psychosocial problems with a great impact on the life of the person affected.

## ***Limitations of Study***

The data obtained from the interviews were very rich and extensive, and publication limitations meant that the authors had to choose what to present.

## ***Implications for perianaesthesia nurses and future research***

The perianaesthesia nurses must raise awareness about bladder damage due to urinary retention and the long-lasting consequences for the affected patient. There is a need of improved, evidence-based bladder monitoring routines during perianaesthesia care to avoid patient damage in the future.

# **Evidence-Based Post Anesthesia Care Unit Practice Guidelines for Determining Length of Stay and Discharge Location for Surgical Obstructive Sleep Apnea Patients**

**Esther Lee<sup>1</sup>**

<sup>1</sup>UCSD Health, La Jolla, California, USA

Obstructive sleep apnea (OSA) is the occurrence of  $\geq$  five apnea/hypopnea episodes in an hour accompanied by oxygen saturation decrease. The American Society of Anesthesiology (2014) recommends OSA patients have extended stay in Post Anesthesia Care Unit (PACU) but no specific guidelines were offered on length of stay. In our own facility, no specific policy existed and questions were raised as to what is the best practice.

A literature review regarding practices on managing OSA surgical patients was conducted in addition to utilization of previous research findings by the PI (EL) and Co-Investigator (JSD). In collaboration with an anaesthesiologist colleague (US) at our facility, guidelines were developed. Three levels of patient classification were developed. Low risk Level 1 patients include with fewer than 2 risk factors on STOP questionnaire; BMI < 35 kg/m<sup>2</sup>; ASA class < ASA III; No desaturations during PACU stay (need to be on Room air for at least 1h); Able to maintain airway patency and saturation levels without stimulation from PACU staff; No opioid use after 30 min in PACU. Level 1 patients may be discharged home or the med-surg floor. Level 2 patients include 2 risk factors on STOP questionnaire; BMI  $\geq$  35 kg/m<sup>2</sup>; ASA III or higher; Occasional, transitory desaturations that resolve quickly; Opioid use in PACU after initial 30 min. Level 2 patients may be discharged to home/floor after 2 or more hours in PACU if cleared by anaesthesiologist. Level 3 patients, exhibit characteristics similar to level 2 but require more airway support during PACU stay. After 3 hour stay in PACU, these patients are admitted to monitored beds.

The development of these guidelines represents innovative practice through utilization of nursing research to provide better care for the OSA patient undergoing outpatient surgery.

The development of these guidelines based on our own research and literature review will define safer ways to manage surgical, OSA patients. The interdisciplinary collaboration with anaesthesiologists is crucial to have the perianesthesia team communicating clearly about patient needs.

# **An Educational Plan for Perioperative Nursing Staff in UCSD: Jacobs Medical Center: A Multi-Modal Performance Improvement Project to Improve Nursing Education**

**Esther Lee<sup>1</sup>**

<sup>1</sup>UCSD Health, La Jolla, California, USA

The problem identified by the perianesthesia nursing staff is that transitioning from a smaller facility to a larger one highlights a knowledge gap for current RNs regarding the change in patient clientele and their comfort in caring for them.

The performance improvement model selected to guide the education plan and monitor performance objectives is the UCSD Educational Diagram developed by Lee and Daugherty. The framework is a guide to improve the knowledge, skills, and attitudes of the nursing staff and increase comfort in treating new patient populations.

The change process will be completed by following the sequential Educational Diagram. The steps are grounded in multi-disciplinary learning theory, and utilize needs assessment surveys, and pre- and post- change data collection as methods to evaluate the efficacy of the teaching plan. The goal is to prepare and educate the nursing staff for the transition to a facility providing higher level of care in a manner that is sustainable and effective regarding different learning styles.

The knowledge, attitudes and skills of the nurses will be evaluated with a follow up questionnaire, similar to the pre-intervention survey. Performance audits will be conducted by nurse managers prior to and following the education training.

The implications of the successful use of this educational diagram indicates that multi-modal education strategies can enhance successful learning habits among staff RNs.

There is strong support for sustainability for this plan, as previous studies indicate nurses' comfort with different patient populations increased following the intervention.

# **Descriptive Characteristics of Obstructive Sleep Apnea Patients at Risk of Longer Post-Operative Hospital Stay**

**Esther Lee<sup>1</sup>**

<sup>1</sup>UCSD Health, La Jolla, California, USA

Obstructive sleep apnea (OSA) is defined as the occurrences of at least five apnea and hypopnea episodes in an hour accompanied by a decrease of oxygen saturation exceeding 4%. OSA may increase perioperative risk in patients requiring general anesthesia, sedation or intravenous analgesia as these agents may dampen the arousal mechanism. In the United States, an estimate of about 18 million people with OSA have gone undiagnosed resulting in various postoperative complications and extended length of stay.

The aim of this project is to examine the characteristics of OSA patients with postoperative risk in elective surgery and which risk factors may lead to longer length of hospital stay.

A single site retrospective chart review study was chosen which included a sample of 153 adults 18 years and older who were screened for OSA using the STOP questionnaire. The inclusion criteria were patients without surgical complications in elective surgeries and an absence of anatomical, genetic and mental abnormalities. The variables associated with characteristics of OSA patients include patients' related factors, medical comorbidities, diagnostic and screening tools and OSA treatment. The lowest oxygen saturation and the number of oxygen desaturation episodes were chosen as measures of adverse events. Aldrete score were used as the metric to determine the length of stay. The study was approved by the Institutional Review Board. Data analysis were performed using SPSS for Windows (Version 22).

The study results of a pilot study showed that age>60, ASA classifications, anesthesia type and narcotic use in the post anesthesia recovery period were statistically significant factors correlating to postoperative risk factors and adverse events. However, several outliers differ from the majority of patients, diagnosed with hypertension and BMI>30, exhibited higher frequency of oxygenation and lowest level of oxygen saturation. The current study examines risk factors for a sample of 51 patients.

## **Personalized Perioperative Care: Implementing Pharmacogenetics in the Perioperative Setting**

**Esther Lee<sup>1</sup>**

<sup>1</sup>UCSD Health, La Jolla, California, USA

While it is an accepted norm that surgical patients can expect post-operative pain and even nausea and vomiting, being able to tailor medications specifically to match the patient's genetic profile would allow providers to prescribe the most effective and appropriate medication. This PI plan developed and implemented a pilot project to incorporate the creation of a genetic profiling process for eligible patients prior to surgery to improve their overall episode of care.

The PDSA model was chosen to develop the pharmacogenetics project. The planning entailed evaluation of the current processes and the changes needed incorporate and sustain the project. Working in a multi-disciplinary team, protocols and policies were developed to serve as a training guide to implement the genetics testing. The Pre-operative Care Center was the site located for the specimen collection.

The project was implemented successfully following a slow roll out. The significance of this project is that it will allow the anesthesia team to utilize only the appropriate medications for the genetic profile of the patient, leading to an overall reduction in pain and post-op nausea and vomiting. Economically, cost could be reduced as it will eliminate the use of ineffective medications. Additionally, from a patient safety perspective, anesthesia would be alerted to drug interactions, genetic disease processes and allergies prior to patient reporting for surgery.

The project is sustained by weekly audits to make sure all eligible patients are approached to offer this testing. Additionally, continued process improvement meetings are held to improve the real time workability of the project.

This practice change aligns with the Professional Practice Model of Nursing Innovation as well as Stellar Outcomes. UC San Diego is one of the first hospitals to offer this service.

# **Globalization of Health Service: Sharing of Best Practices in PeriAnesthesia Nursing Care, A Case Study of Cross-border Institutional Collaboration**

**Esther Lee<sup>1</sup>**

<sup>1</sup>UCSD Health, La Jolla, California, USA

Healthcare is a global concern among both developing and developed countries and nursing is a global profession as evidenced by the flow of healthcare professionals across international boundaries.

With English as the language of science and commerce and post-colonial influence in domestic healthcare practice and training, many former Anglo-speaking colonial settlements become parts of an expansive market for health human resources migration. The movement of health personnel mainly flows from the low and medium income countries to the high income countries to sustain their health systems. The resulting brain drain and shortage of health workers adversely impacts a source country's health system affecting access, quality, cost of health services and widens global inequity. The World Health Organization was so alarmed by this trend that they declared global health migration as the biggest health threat of the 21st century.

This report illustrates that an overseas health network sees international exchange and collaboration with an exemplary academic health system as the path to develop clinical and management excellence, global and interprofessional healthcare leadership, improve staff morale and retention and attain brain gain. For the provider institution, this collaboration enhances their mission of contributing to a more balanced, equitable and healthier world.

# **Obstructive Sleep Apnea: Emphasis on Discharge Education after Surgery**

**Esther Lee<sup>1</sup>**

<sup>1</sup>UCSD Health, La Jolla, California, USA

Over half of the surgical patients with obstructive sleep apnea (OSA) are predisposed to increased incidence of perioperative complications. The American Society of Perianesthesia Nurses recommends that discharge education (DCE) on OSA should be provided after surgery to OSA patients to promote continuous positive airway pressure (CPAP) compliance and self-care behaviors at home.

Participants were adult surgical patients over 18 years old diagnosed with OSA, who use CPAP. Phase one was completed using the Apnea Knowledge Test to measure patients' knowledge on OSA. Phase two included a second set of surgical patients that were provided DCE on OSA by telephone, five to seven days before surgery. Education was reinforced on the day of surgery and seven to 10 days after surgery. Outcomes measured were CPAP usage and the Epworth Sleepiness Scale score to evaluate effectiveness of this evidence-based practice project.

Sixty-six participants were provided DCE on OSA. In phase one, the mean patients' knowledge demonstrated a 23.9% increase from pretest to three days after discharge. In phase two, the mean CPAP hours per night usage increased by a total of 72 minutes after DCE on OSA provided. There was no clinically significant change in ESS over time.

Patient education about OSA and its risk for complication after surgery starting from preoperative to postoperative is of utmost importance. The DCE on OSA demonstrated effectiveness in increasing CPAP compliance after surgery. Thus, it could be implemented in the surgical setting as part of routine clinical care.



# How to Create a Safe and Non-Clinical Environment for Children and Parents in a Postanaesthesia Care Unit (PACU)

**Lise Lund Elsberg<sup>1</sup>**

<sup>1</sup>Randers Regional Hospital, Region Midtjylland, Denmark

Children are vulnerable after anaesthesia and their sensory perception is altered. We experience that some of the children in the PACU are confused and insecure. Some children cry and seem uncomfortable in the clinical surroundings. Parents seemingly feel alienated. They continuously ask about the monitoring status, and feel insecure on how to respond to their child's behaviour. Other patients report feeling stressed when children are crying, and often ask to be discharged from the PACU. An ethnographic study showed that the clinical setting was characterised by noise. The children were unfamiliar with the clinical environment, and they expressed that they needed something recognisable such as their parents, their teddy bear and pictures of nature. During interviews the parents asked for more privacy and cosiness. Nurses feel stressed and distracted when children are crying, and they worry about patient safety. Thus, we decided to create a more safe and comfortable environment for children and their parents in the PACU.

The principles of the project were healing architecture and the innovation process. It consisted of four innovative phases: Definition, Discovery, Development and Implementation. The clinical environment has changed into a cosy and homelike living room with a comfortable sofa, cushions, transparent light curtains which provide privacy without compromising patient safety. A large screen for mood projection has replaced the old pictures on the walls. When a child wakes after anaesthesia, a video of the rising sun is displayed and the lightning in the room is slowly increased. The child can choose relaxing moods featuring baby animals from around the world on a tablet. The inclusion of controlled lighting combined with music (mindfulness) creates a soothing atmosphere of safety for everybody. The oxygen and suction equipment is hidden behind a panel. Noise is reduced by noise plates, latches on cabinet doors, staff behaviour and rules for alerts on monitors.

Based on focus group interviews with the nurses in the PACU and field observations we found that the comfortable non-clinical environment for children and their parents reunites children and parents and reduces the children's crying and pain. As a 7-year-old boy said: "Even though I had a sore throat, watching the animals made me forget all about it." The homely atmosphere nudges the parents to act as parents. They are encouraged to sit with their child in the sofa even though the child is still sleeping. The design, scenarios and music in the room help to distract the child and act as a catalyst for conversation between the nurses, the child and parents. When being able to change the light and the moods, it supports their empowerment. Parents do not ask about the monitoring status; they take care of their child. A parent said: "Lovely, homely, cosy, less stressful ... we were embraced in a different way. It wasn't so clinical, and it made a huge difference."

Additionally, other patients in the PACU seem more relaxed because of the reduced noise. The nurses experienced that relaxed parents seem to impact positively on their child. The children cried less. The noise reduction leads to a less stressful work environment and a higher patient safety. Finally, the design of the room nudges the nurses to change behaviour. The nurses can focus on treating and caring. The innovation project has succeeded implementing a safe and comfortable non-clinical environment for children and parents in our PACU.

# **Safe Handling and Disposal of Mitomycin C in the PACU Following Intravesical Administration in the OR**

**Gloria Luu<sup>1</sup>**

<sup>1</sup>Veteran Affairs Medical Center of San Francisco, California, USA

Mitomycin C is an antineoplastic drug, which requires special handling for disposal to minimize any potential danger to staff, patients and the environment. Mitomycin C is ordered by Urology Surgeon and administered in the OR at the conclusion of transurethral resection of bladder tumor (TURBT). Our PACU averages 10 TURBT cases per month. Mitomycin C is instilled through a foley urethral catheter using a tipped syringe. A clamp is placed across the catheter to maintain the drug in the bladder for 1 hour. The patient is transferred to PACU. The bladder is allowed to drain by removing the clamp, maintaining a closed system. If the catheter is to remain in place then a new drainage bag is attached. The urinary drainage bag with/without the catheter is disposed of as biohazardous waste. It is not recommended that the nurse or doctor irrigate the catheter as this places the staff at risk for exposure from splashing. Pregnant or breast-feeding workers are exempted from handling hazardous agents.

There had been no training in the safe handling and disposal of Mitomycin C in the PACU following intravesical administration in the OR. No written guideline or standard competency existed.

## **Expediting PACU Phase I Care**

**Myrna Mamaril<sup>1</sup>**

<sup>1</sup>The Johns Hopkins Hospital, Ellicott City, Maryland, USA

Perioperative leadership at a large teaching hospital identified excessive PACU Phase I length of stay that contributed to operating room holds, delay of starting next preoperative cases, frustrated healthcare team members, and dissatisfied patients and families due to long wait times. A lean sigma team was convened to identify clinical, operational, and systems issues that increased PACU Phase I length of stay for patients. Key metrics were identified, defined, and benchmark targets were established.

Baseline data of electronic timestamp documentation of PACU Phase I patients' length of stay (LOS) was collected. Other information included was the LOS by individual nurse (de-identified by numbering code), how many handoff to other caregivers occurred, and identified outlier (uncontrolled pain, critical events) were excluded and reported. Invite PACU nurses with "Best" practices to focus group to brainstorm opportunities and barrier to expediting care. The goal was to decrease PACU Phase I LOS by 25% for all three specialty PACUs in nine month time period. Clinical Nurse Specialist (CNS) educated all PACU nurse managers, charge nurses, and anesthesia providers on baseline data and benchmark targets. Meet with staff monthly to report progress. Communicate monthly outcomes in staff meetings and on benchmark tracking board. Collaborate with anesthesia providers to assist in managing patients' pain with multimodal approach.

All three specialty PACUs met or exceeded the PACU benchmark of decreasing PACU Phase I LOS by 25% or greater at the end of a nine month period.

Implementing this innovative model for expediting safe quality care for PACU Phase I patients impacts the reduction of operating room holds, improves multidiscipline collaboration and patient/family satisfaction, and increases perioperative throughput for efficiency and efficacy.

# **Postoperative Urinary Retention: Addressing POUR in the PACU with Evidence**

**Dr Denise O'Brien<sup>1</sup>**

<sup>1</sup>Michigan Medicine - University of Michigan, Ann Arbor, Michigan, USA

Postoperative urinary retention (POUR) can result in permanent bladder damage for our perianesthesia patients. Recent literature describes the importance of assessing risk and promote bladder function throughout the perianesthesia care continuum. As perianesthesia nurses, we focus on respiratory and cardiovascular function with less emphasis placed on other body systems. Perianesthesia nurses may be unaware of the risks of prolonged urinary retention and possible negative outcomes for patients under our care. Literature focusing on POUR is increasingly supportive of the importance of assessing and managing urinary output during the perianesthesia phase of care.

Initially, the staff nurse lead identified the process for POUR risk identification and management, provided education for all nursing staff, the anaesthesia providers and surgeons practicing in one free-standing surgery centre affiliated with the academic medical centre, and implemented the process in the centre; following the initial launch, work began to implement the POUR risk identification and management process across multiple sites associated with the medical centre.

Perianesthesia nurses provide quality care for their patients by increasing their knowledge of the risks associated with POUR and evidence based options available to assess and manage bladder function and urinary output during the perianesthesia phase of care.

Perianesthesia nurses will know the risks and outcomes associated with postoperative urinary retention and describe one evidence based model of risk identification and management that can be utilized in their practice settings.

# **PACU Handover Timeout: Promoting Safe Care Transitions**

**Dr Denise O'Brien<sup>1</sup>**

<sup>1</sup>Michigan Medicine - University of Michigan, Ann Arbor, Michigan, USA

The current state of the anesthesia provider to PACU nurse handover was evaluated. It lacked standard structure, variable content was discussed, not all team members were present for entire handover, documentation was cumbersome and the teamwork and communication were substandard. Data collected by students working for the Department of Anesthesiology described content discussed and its frequency, rating of communication and teamwork, and time spent at the bedside during handover.

Each member of the team participated in meetings to review current content of the handover, discuss meaningful data elements needing to be communicated, and design the handover as a timeout to cause each member to pause and focus on the process. Support has been elicited from PACU nursing, anesthesiology, surgeons, and administration.

The process remains in development, with content of the handover timeout finalized, education plans being reviewed, with a target date for launching the newly revised handover timeout in the first quarter of 2017.

The description of the process used to improve PACU handover between the anesthesia provider, surgeon and PACU nurse will help other practicing perianesthesia nurses evaluate their handover processes and possibly modify those processes to improve the quality of the handover.

Providing the perianesthesia nurse with a structured, scripted handover process will facilitate communication of key elements of patient information between the nurse, anesthesia provider and surgeon and reduce the risk of information loss and possible adverse patient outcomes.

# App for Children's Pain Management

**Bodil Pallesen<sup>1</sup>**

<sup>1</sup>Aarhus University Hospital, Aarhus, Denmark

Children can suffer from pain after surgery, more often than doctors, nurses and parents think. This statement is found in recent Danish research. Today parents are left alone to self-management of children's pain following treatment in short-stay or day surgery. It is possible to help parents measure their child's pain using validated methods. The aim of this study is to support parents self-management, using validated methods in an app.

The App includes explanation to pain score, using faces pain scales, a numeric pain scale and it explains different coping strategies according to the child's age and stage of the intellectual development of the child. The app is developed to empower parents by a team of doctors and nurses in the Danish University Hospital in Aarhus, Central Region Denmark. The app is called *Børn og Smerte (Children and Pain)* and is based on validated research of pain measurement, coping strategies and personal informatics. The App is designed to be used in perioperative recovery and at home by parents with children age 3 - 15 years.

Parents and children are presented to the app at hospital. After having downloaded the app to their mobile phone or tablet, it can come in useful at home. The App offers security, so the child's pain score can be integrated to the child's Electronic Patient Record (EPR) and feedback to a survey program for research and quality management.

A systematic follow-up of postoperative recovery feedback about the child's own recovery process, will improve safety and self-care and increase patient participation. Furthermore, by receiving the child's pain score in the EPR, healthcare professionals can evaluate and compare the effectiveness of different approaches to perioperative care and thereby increase the quality of postoperative care.

# **Ceasing the Routine Commencement of Oxygen Therapy in a Recovery Unit**

**Julie Preston<sup>1</sup>**

<sup>1</sup>Austin Health, Doncaster, Victoria, Australia

It can be very difficult to change nursing practice. In this case, patients admitted to the recovery unit would routinely be administered supplemental oxygen therapy regardless of the patients SaO<sub>2</sub>. However, there is an increasing body of evidence that this routine commencement is not recommended and in some cases may be harmful.

Nursing staff conducted in-service education and sent email notifications to nurses working in the recovery unit and anaesthetists at the hospital regarding the rationale for ceasing the routine commencement of oxygen therapy. Instead, oxygen therapy was to be commence when a patient's oxygen saturation was persistently below Urgent Clinical Review (UCR) criteria (SaO<sub>2</sub> < 94%).

Implementing evidence-based care can be achieved using emails and in-service education.

A simply designed multidisciplinary education program prevented every patient in the recovery room from receiving supplemental oxygen. Now, oxygen is administered according to evidence-based criteria.

# **Education Flexibility is Key for Perianaesthetic Advanced Life Support (ALS) Competency Completion**

**Julie Preston<sup>1</sup>**

<sup>1</sup>Austin Health, Doncaster, Victoria, Australia

There is approximately 90 nursing staff in the perianaesthetic/recovery room department requiring annual ALS competency assessment. Due to a number of barriers, it has been very difficult to ensure that these nurses completed their annual ALS competency in order to maintain their knowledge and skill in an emergency. As a result the education team, who are primarily accountable for this mandatory training and assessment requirement, needed to establish an expectation of annual competency completion and then ensure its sustainability.

During the first year, the education team engaged key stakeholders and overcome the many barriers to enable annual ALS competency completion. To do this the educators used a variety of strategies. First, education was provided in innovative and novel ways to meet knowledge and skill gaps. Second, a time in the year that suited both the clinical and education team was selected to gather and maintain momentum. Third, ALS assessment equipment was obtained for the sole use of the perianaesthetic/recovery room education team to access whenever an opportunity arose. Fourth, the term ‘assessment’ was changed to ‘refresher’ to reduce the fear of passing or failing the competency. Fifth, a competitive element was introduced. Nurses were allocated to teams and they could keep track of how many members of their team had completed the competency and where their team was ranked as this information was publically displayed. Sixth, the educators encouraged staff to complete their competency in teams rather than on an individual basis to reflect clinical reality. Finally, the managers and educators worked together to identify times when staff could be available for competency completion.

The second year, the expectation had been established that 100% compliance with the annual ALS assessment would re-occur. Many of the strategies from the previous year were now in-bedded or were changed/removed. The only addition was a deadline by which staff were to have had their ALS competency completed.

The third year, a more sustainable process was needed as the educator workload during the ALS competency completion months was significantly high. Thus the ALS competency completion is now spread over the entire year.

Education flexibility and knowledge of the barriers is key for perianaesthetic nursing staff to complete their Advanced Life Support (ALS) competency on an annual basis.

The annual ALS competency completion is now an expectation for perianaesthesia nursing staff and is a sustainable process for the education team.



## **A Journey into the Operating Room**

**Sonia Reyes<sup>1</sup>**

<sup>1</sup>Austin Health, Melbourne, Victoria, Australia

In 2014 the recovery nurses of the Austin Health one of the teaching hospital in Melbourne, as part of the Standard 2 Partnering with Consumers, did a patient satisfaction survey of the Parent/Guardian of paediatric patient.

The parents and guardians who answered the survey mentioned suggestions one of them, was how to find their way back to the recovery room. So we decided to make a video which would demonstrate the process in the Operating Suite and to see a real operating room and how the staff is involved with the patients.

It was decided that the video would be a narrative video with English subtitles, also the video help patients with the hearing impaired and those who their English is the second language.

Once the script was finished, for quality control purposes the script was randomly viewed by patients who had gone through the same experience, they said the script was a clear reflection of what they had experienced.

When the video was filmed, the real staff of the operating suite of Austin played most of the roles, except for the paediatric patients. The journey into the operating room was edited, there are 2 videos both are 4 minutes long, the video show specific clues like wall signs, the lifts, and how to go to the Recovery room.

To evaluate if the video has achieved its objective, “to reduce the stress level of the unknown”, the preadmission anaesthetic clinic was involved, the nurses showed the video to patients in the clinic that had never being into the operating room, a few days after the surgery a recovery nurse followed up with the patient and surveyed them. The video has improved the care by reducing patient stress. The stress level could have a negative impact in the patients’ health.

# **Perioperative Pain-management of Patients Undergoing Amputation: What is the Recent Evidence in Clinical Practice?**

**Helle Rømer<sup>1</sup>**

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## ***Purpose of project***

Phantom Limb Pain (PLP) is defined as pain developed after amputation. It affects 60-80% of the patients and poses a highly negative impact on the amputees' quality of life. A diverse range of treatment approaches including pharmacological and non-pharmacological approaches have been applied, but mechanism-based specific treatment guidelines for PLP are still lacking. Hence, this project attempted to search and summarise available evidence related to PLP with a particular focus on identifying strategies for pharmacological treatments during the perioperative period.

## ***Methodology***

A topical review was conducted and three relevant medical databases were included for the literature search using the keywords: "phantom limb pain, pain measurement, perioperative period". Only human studies in adults were included. Period: 2000-April 2016. Languages: English, Danish and Swedish.

## ***Results and Discussion /Conclusion***

A total of 722 studies were found, among those 48 articles were relevant. Among those only eight interventional studies were included where pharmacological treatments offered during the perioperative period could be found. These studies showed that different interventions using epidural and/or intravenous PCA exist with satisfactory results. Pre-emptive epidural treatments, anaesthesia and peripheral nerve catheters were studied. One study examined Gabapentin effect on post-amputation pain.

Overall, findings presented that no standardised treatment for the acute period of PLP exists. However, optimised pre- and postoperative epidural or intravenous PCA and prolonged peripheral nerve catheters could decrease PLP. Morphine, Gabapentin and Ketamine seemed to reduce post-amputation pain.

## ***Implications for perianaesthesia nurses and future research***

A multimodal pain management strategy considering Paracetamol, NSAID, opioids and pain catheters would be the best current treatment of PLP. Evidence-based studies and application of a multimodal pain management strategy that implements the bio-psycho-social model would assist in formulating an efficient algorithm for PLP in the future. Additionally, identifying pain-mechanisms underlying PLP can offer better pharmacological targeting.

# Exploring the Effect of Peripheral Nerve Catheters Used in Postoperative Pain Management

**Maibrit Sørensen<sup>1</sup>**

<sup>1</sup>Aalborg University Hospital, Aalborg, Denmark

## ***Purpose of Project***

Peripheral nerve catheters (PNC) with a continuous infusion of local anaesthetic are used as our standard for perioperative pain management of patients undergoing major orthopaedic surgery. The aim of this study was to explore the effect of PNC and was the effect dependant on the application method (nerve stimulation, ultrasound or a combination of both).

## ***Methodology, Conceptual Model, Research Design***

During 13 months we collected data from a total of 506 PNC. Type of blockade and the technique for insertion of the catheter used by the anaesthesiologist was recorded. Patients graduated the effect of the catheter. (Optimal effect, Suboptimal (defined: if boluses were needed to get an optimal effect) or No effect. Absence of terminal analgesia was recorded. In addition, we registered the number of days the patient had the PNC. Most patients received a low dose of slow release Morphine in addition to PNC.

## ***Results, Discussion / Conclusion***

The rate of PNC with optimal function was 78,4%, suboptimal effect 16,8% and no effect 4.8%. There were no changes in effect due to application method. Ultrasound was used for 47.2 %, 74,9% optimal and 19,3% suboptimal. Nerve stimulation was used for 49,8%, 81,7% optimal and 15,5% suboptimal. Both models were used for 3 %, 86,7% was optimal. Average treatment period were 3,8 days (0-29 days).

In conclusion, the results of pain management with PNC works well but require a postoperative follow-up with the purpose of adjusting the infusion of local anaesthetics. Another study should examine morphine consumption and use the registered pain scores made by the patient.

## ***Implications for perianaesthesia nurses and future research***

PNC's are an excellent strategy for treating pain in major orthopaedic surgery, especially when treating chronic pain patients or patients at risk.

## **Evidence Based Practice – This is How We Do It!**

**Diane Swintek<sup>1</sup>**

<sup>1</sup>Monkton, Maryland, USA

The Institute of Medicine has mandated the 90% of the clinical decisions made by nurses be based on evidence by the year 2020. Bedside nurses are tasked with providing patient care based on scientific evidence while working at increasing speed.

The nursing workforce is accustomed to provide care based on what preceding generations had stated was good practice. Embedding scientific evidence in nursing practice requires expanded education in utilizing evidence based practice (EBP). Bringing EBP to the bedside requires nurses to critique and synthesize evidence for application in practice and can be time consuming.

The American Society of Peri-Anaesthesia Nurses (ASPAN) rose to the challenge of providing the evidence in a format easy for use and quickly available to the bedside nurse by creation of evidence based guidelines and practice recommendations. By creating an infrastructure of experts, tools and dissemination of evidence based guidelines and practice recommendations, ASPAN is dedicated to improving care for the perioperative patient. This presentation will outline the rigorous process for creation of these guidelines and practice recommendations.

Infrastructure within ASPAN was created over a 10 year period starting with creation and adoption of the ASPAN EBP model, creation of unique ASPAN critique tools, partnering with a global synthesiser of evidence and library Joanna Briggs Institute training centre at UCSF. ASPAN members who met criteria (formal education, research experience and writing skills) could apply for a JBI ASPAN Training grant. Resulting Practice guidelines from the ASPAN Perianesthesia Nursing Standards, Practice Recommendations and Interpretive Statements were then created and supported by best available evidence. Education on critique and appraisal of literature for validity, significance and generalizability offered through ASPAN education to members. Application of the clinical practice recommendations at the institution and unit level leading by ASPAN members impact a large number of patients. The literature indicates use of evidence based practice by healthcare providers results in decreased variability in practice, better patient outcomes and decreased costs.

American Society of PeriAnesthesia Nurses is using evidence to create and update clinical practice guidelines. This makes translation of evidence into practice much easier and widespread in the perianesthesia setting thus improving patient care and outcomes.

EBP has been shown to improve patient outcomes, decrease cost and variation in clinical practice. Increasing knowledge of and access to EBP guidelines for perianesthesia nurses will improve patient safety and outcomes. Increasing nurses understanding of the steps in EBP, how to critique and synthesize the literature empowers nurses to think critically and demand evidence for patient care.

# **In Retrospect – Peri-Anesthesia Nursing Practice in The Philippines: Onwards to a Model and Standards**

**Dr Paul Michael S. Tan<sup>1</sup>**

<sup>1</sup>St. Luke's Medical Center, Tacuig City, Metro Manila, Philippines

## ***Introduction***

The Peri-Anesthesia period begins when the patient is informed about procedure until recovery and continues until the patient resumes his or her usual activities.

## ***Identification of the problem***

At present, there were Peri-Anesthesia Standards present in other countries however; there were no existing model and standards for Peri-Anesthesia Nursing in the Philippines.

## ***Purpose of the Study***

The overall aim of this study is to describe the Filipino Peri-Anesthesia Nursing (PAN) practices from different perspectives then create a Model and Standards that would be applicable in the Philippines.

## ***Methodology***

This study utilized Mixed Qualitative-Quantitative research approaches in 3 sequential phases. The First phase was performed using Retrospective Document Analysis, In-depth Interview, and Integrative Literature Review to describe Filipino PAN practices. The Second phase was Model and Standards Development. The Third phase was executed using t-Test, ANOVA, and Scheffé Method to evaluate the proposed P.A.N. Standards as to Relevance, Clarity, and Acceptability. Purposive Sampling technique was used in identifying staff nurses, nurse-leaders, and anesthesiologists as respondents (n=197). The research tools underwent Expert Validation and Reliability test showed good remarks ( $\alpha=0.85$ ) using Cronbach Alpha.

## ***Results***

After triangulation, clustered themes resulted from Qualitative Approaches as follows: Nursing Process, Ethico-Legal Responsibilities, Communication and Collaboration, Research and Quality Improvement, Education and Training, Environment of Care, and Leadership-Management. The themes have enlightened the development of "P.A.N. Rocket Model" and the concepts were used in formulating "7 Standards for Peri-Anesthesia Nursing". In Quantitative approaches, results showed that respondents viewed the Standards to be Highly Relevant ( $x=3.76$ ), Very Clear ( $x=3.62$ ), and Highly Acceptable ( $x=3.60$ ). Variations as to Relevance were noted between staff nurses and anesthesiologists (Sig.=0.017), while other parameters showed no significant differences.

## ***Discussion***

Significant differences rooted from the variety of perceptions of nurses and anesthesiologists because of the different educational and clinical background of the respondents. But despite these differences, the respondents viewed that contents of the standards were relevant, clear, and acceptable for Peri-Anesthesia Nursing Practice.

## ***Conclusion***

The PAN Rocket Model and 7 Standards will serve as guide for Peri-Anesthesia Nurses working in the Philippines in performing safe and quality care.

## ***Implications for perianesthesia nurses and future research***

The results can be used for the advancement of Filipino Nursing Profession.

## **Improving Surgical Patient Flow within the Perioperative Care Delivery**

**Pamela Windle<sup>1</sup>**

<sup>1</sup>CHI St. Luke's Medical Center, Bellaire, Texas, USA

Our hospital has 21 Main OR suites that provided all types of surgery for adult patients. This includes general surgery, urology, orthopaedics, neurology, EENT, plastics, etc. First case surgery usually starts at 0730. Day Surgery is located on the 3<sup>rd</sup> floor while OR & PACU is located on the second floor. On-time efficiency is low with several factors contributing to the delay of first cases. This affected the rest of the surgery schedule for the day. An interdisciplinary group met and several suggestions and solutions were discussed and piloted. This session will describe the improvement project that increase physician and patient's satisfaction scores and improved throughput.

A group meeting was held every Friday and several scenarios to improve patient flow for first cases were discussed. Implementation of using PACU area made an improvement for first case start time.

Physicians-led group has shown to improve the effectiveness of several innovative practices and suggestions. Weekly updates and improvements are discussed and several other areas regarding consent, marking, clipping were resolved by using the PACU area as a preop holding which is located on the same floor as the OR. The multidisciplinary group and team work has shown great results.

Collaborative practices with physician involvement has shown great impact in the improvement process for first case surgery start times.

## **Point of Care Improvement for Cardiovascular Surgical Patient Flow**

**Pamela Windle<sup>1</sup>**

<sup>1</sup>CHI St. Luke's Medical Center, Bellaire, Texas, USA

Our hospital has 12 CV OR suites that provided cardiovascular surgery such as ACB, Valve replacements, vascular surgery and all types of transplant cases for adult patients. Patients were preop on the 6<sup>th</sup> floor near the cath lab & CCU area. Problems occurs on a daily basis, such as delays for first case surgery, family members are lost, surgeons and anesthesia refusing to go to the 6<sup>th</sup> floor to interview patients and inconvenience for OR personnel to bring patients from 6<sup>th</sup> floor to the 2<sup>nd</sup> floor CVOR. This new department also created 6 bed recovery area for simple outpatient and inpatient surgeries not requiring ICU care. By creating this new department, patient flow has improved with all CV personnel happy that patients are located on the same floor for preop care. This session will describe the improvement project that increase staff, physician and patient's satisfaction and improved surgical throughput.

Continuous Performance Engagement (CPE) team was formed and met to improve the CV Surgery cases to meet the demands of the surgeons, anesthesia and patients/family concerns. Group met every week with the assistance of the Quality Project manager. Several scenarios to improve CV patient flow were discussed and the pilot was performed by opening a new department for CV Preop and Recovery . Implementation of using this new CV Preop/PACU made an improvement after the first 6 months of implementation.

By opening a new CV Preop & Recovery department closer to the CVOR, majority of the surgeons and anesthesia were impressed of the vast improvement of the patient flow. Admitting personnel now comes to the point of care and patients and families no longer get lost in this huge hospital. By using an open 6 bed bays, patient flow has improved overtime after 6 months of training, education and staff utilization. The multidisciplinary group and team work has shown great results for preop patients as well as for postop patients.

Collaborative practices with physicians involvement and admitting department has shown great impact in the improvement process for CV surgeries. Now, 2 years of implementation with this new department has shown great results.

## **Quality Improvement: Back to Basic: Promoting Consistent Positive Patient and Specimen Identification for Patient Safety**

**Pamela Windle<sup>1</sup>**

<sup>1</sup>CHI St. Luke's Medical Center, Bellaire, Texas, USA

Baylor St. Luke's Medical Center completed a “Big Bang” Epic implementation that includes switching from Care Fusion specimen collection to Epic specimen collection process. After one year of implementation, a huge spike in the number of barcode scanning overrides were observed from scanning the patient armband down to scanning the specimen label to complete the collection process before sending collected specimens to laboratory services. These breakdown greatly impacts patient safety due to a gap in positive patient and specimen identification.

Several concerns were raised from equipment problems (barcode scanner, printer not working), several specimen collection process by service (ED, In-Patient Units to Perioperative Services), network issues, system issues and workarounds developed after one year post implementation. Positive Patient and Specimen Identification Committee where convened to address the problem.

The committee looks into change management components of the following; People, Process and System to come up with solutions and address the issue.

System: equipment, network and Epic system where reassessed and concerns where immediately resolved;

Process: specimen collection workflow were revisited, a report was created in Epic to drill down to the user level who overrides barcode scanning;

People: a module specific training were developed for each service Emergency Dept, In-Patient and Perioperative Services for specimen collection.

Monitoring of barcode overrides through the use of Epic workbench reports started. Constant reporting to managers and other stakeholders were sent weekly to find patterns and zero-in on repeat offenders. The drill down reports were use to concentrate the clinical managers efforts to repeat offenders and system problems. Label printers, barcode scanner and network issues were addressed and mandatory module specific education were completed. Despite the different challenges encountered, to date the total number of overrides went down from 140 every 2 days down to 32 after 40 days of project implementation.



# **Leveraging Technology to Reduce Catheter-Associated Urinary Tract Infections**

**Pamela Windle<sup>1</sup>**

<sup>1</sup>CHI St. Luke's Medical Center, Bellaire, Texas, USA

Improving patient safety and quality by leveraging electronic health system to drive standardize and consistent clinical practices at the point of care throughout Health System in order to decrease and prevent catheter-associated urinary tract infections (CAUTI).

According to Centers for Disease Control and Prevention (CDC), urinary tract infections (UTI) are the fourth most common type of healthcare-associated infection, with an estimated 93,300 UTIs in acute care hospitals in 2011 and account for more than 12% of infections reported by acute care hospitals. In 2008 Centers for Medicare and Medicaid Services stopped reimbursing for any costs associated with CAUTIs.

Variation in practice, incomplete documentation and inappropriate indications are assumed to be contributors to the high rate of CAUTI in hospitals. Our institution created a multidisciplinary CAUTI team to decrease and prevent CAUTI. Using the quality improvement methodology of rapid-cycle change Plan-Do-Study-Act (PDSA) cycle, the team was able to expedite the hospital-wide change which resulted to a significant drop of the hospital Standardized Infection Ratio for CAUTI from 1.572 to 0.314.

A standardized order set and nursing documentation was embedded in our EHR system and a system-wide clinical education on catheter insertion, care and documentation were initiated using Train the Trainor approach followed by skills validation. A month after the implementation of the algorithm SIR – CAUTI rate drops to 0.314 and continuously registers better than the national benchmark. The number of Urinary Catheter use and line days dropped from an average of 14 days to 4 days for inpatient and 0.75 days for perioperative. Creation of a goal-oriented interdisciplinary team that focuses on redesigning EHR and clinical education/training to align and standardize new clinical practice improves patient safety and quality.

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